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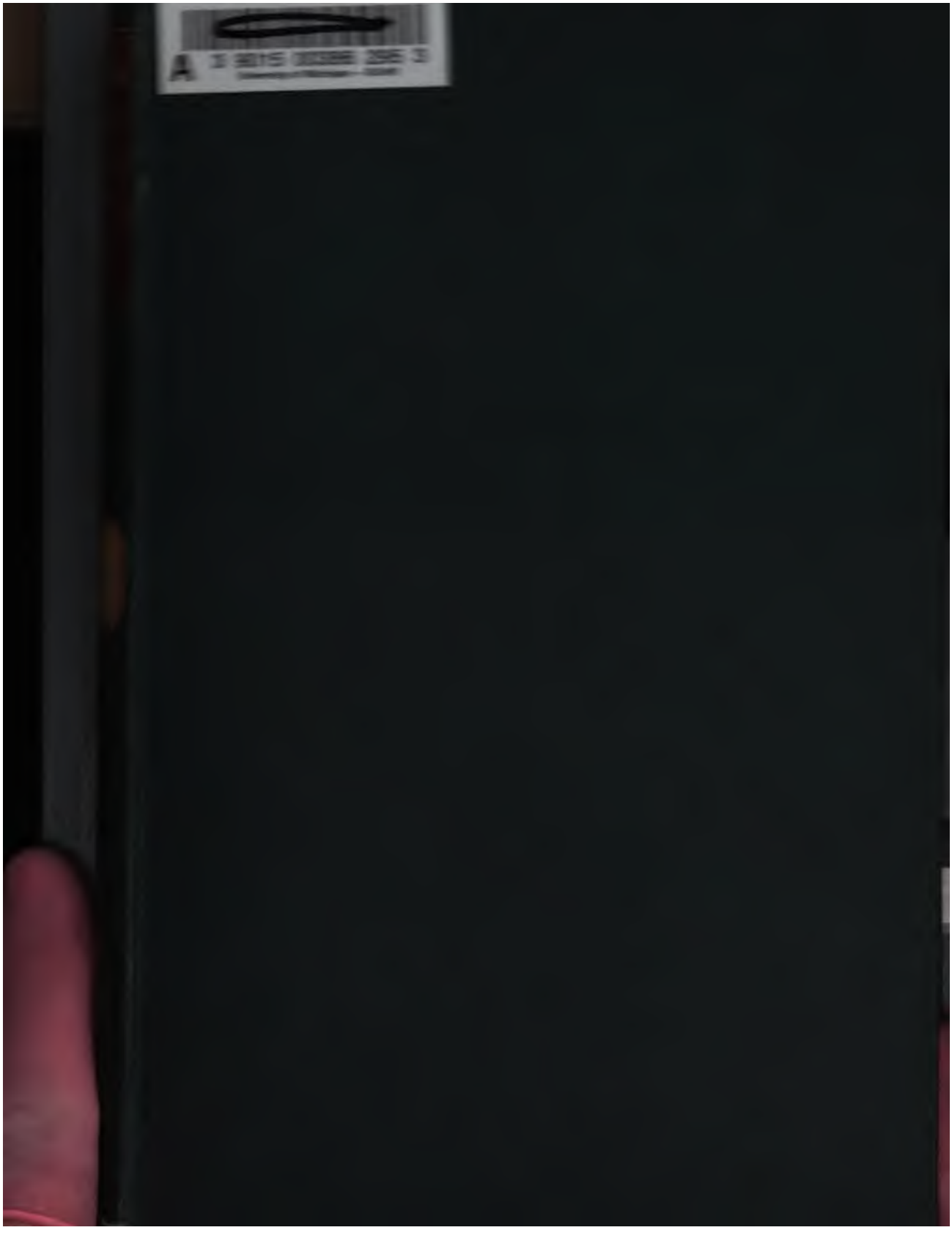

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Homo, naturæ minister et interpres, tantum facit et intelligit, quantum de naturæ ordine, re vel mente observaverit; nec amplius scit aut potest.—BACON.

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VOL. I.

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INDEX, VOL. I.

PAGE.

Abortion, curious case 180
Abortion, Ergotin in 281
Abscess, treatment of Mammary 373
Address to Medical Profession, re-issue of Journal 1
Address of Prof. Satchwell 89
Address, review of Atlee's 247
Agnew, review of, on Lacerations of Perineum 358
Albumen, test for 276
Algæ, H. C. Wood on Fresh Water 168
Ammonia, Hydrochlorate of 275
Aneurism, Dr. R. A. Kinloch on Femoro-Popliteal 218
Aneurism, Dr. R. H. Gibbes, of Neck and Ligature of Carotid 344
Amaurosis from Fracture of Sup. Maxillary, Dr. J. P. Wall on 322
Anatomy, Hand-Book of Morbid 165
Anæmia, diagnosis of 77
Antiperiodic, new 75
Aspirator, Capillary 78
Aspirator, in Hernia 176
Aspirator, in Poisoning by Laudanum 371
Asthma, Nitrate of Amyle in 75
Atlanta Medical Journal 375
Atlee, Dr. W. L., Review of Address in Obstetrics 247
Athill, Diseases of Women 157

Bailey, Dr. T. P., on Chlo. Hydrate in Malarial Fevers 243
Baldwin, Dr., on Death of Dr. Nott 184
Baruch, Dr. S., on Subinvolution of Uterus 38, 113
Bed Sores, to Avert 279
Bemiss on Yellow Fever 304
Biddle, Materia Medica for use of Students 363
Black Vomit of Yellow Fever, Dr. Jones on 333
Blood in Yellow Fever, Prof. Jos. Jones on 333
Bloodless Operations 364
Bones, Analysis of, Dr. W. D. Wamer 26
Brickell, Dr. D. W., on Yellow Fever 217
Brown, Dr. H. C., on Yellow Fever and Quarantine 66
Bryant's Surgery, Review of 261
Buist, Dr. J. S., cases in City Hospital 22
Bulloch, Dr. W. G., on Operations for Cataract 239

Cadet on Cholera 60, 362
Carotid, Ligature of, by Dr. R. W. Gibbes; on Aneurism 344
Cases in City Hospital, Dr. J. S. Buist 22

170540

PAGE.

Catarrhal Pneumonia, J. F. M. Geddings, M. D., on....1, 126
Cataract, Dr. W. G. Bulloch, on Operation for.... 239
Charleston Medical Journal, Re-establishment of, Editorial.... 1
Chilblains, treatment of.... 368
Children, Medicine for.... 175
Children, Scarification of Gums.... 181
Cholera, Cadet on Black Sulph. of Mercury in....60, 362
Cholera, treatment of.... 277
Cholera, Editorial Notice of spread.... 292
Cerebro Spinal Meningitis, Dr. C. H. Ladd on.... 44
Cerebro Spinal Meningitis and Erysipelas, Dr. B. Rhett on....37, 286
Cerebro Spinal Meningitis, Dr. J. Beatty Jennings on.... 223
Cerebral Hemispheres, two.... 74
Cerebral Exhaustion, treatment of.... 173
Clavicle, new method of treating Fracture of.... 369
Clinical Medicine, Trousseau's Lectures on.... 364
Climate, Dr. J. C. Harris on.... 66
Coffee and S. of Quinine.... 75
Constipation, treatment of.... 278
Corns, remedy for.... 75

Dalby, Dr. W. B., Review of Diseases of Ear.... 362
Death, test of.... 279
Delafield's Hand-Book of Post Mortem Examinations.... 185
Diabetes, Mellitus.... 277
Diarrhœa, Oxide of Zinc in.... 170
Diathesis, Dr. Alex. Forster on Purulent.... 245
Disinfectants.... 171
Diphtheria, treatment of....371, 372
"Doctor in Medicine," Dr. Stephen Smith on.... 70
Douglass, Dr. Geo., on Hemorrhagic Malarial Fever.... 240
Dyspepsia, Functional.... 77
Dyspepsia, Dr. John M. Turner on Pathology of.... 316

Ear, Review of Lectures on Injuries of.... 362
Ecraseur, new.... 280
Electricity, Medical, Tibbets on.... 163
Enteric Fever from Infected Milk.... 370
Epistaxis, Sponge Tent in.... 177
Epistaxis, to arrest.... 280
Ergotin in Hemorrhage.... 275
Erichsen, Review of Surgery by.... 150
Erysipelas, Traumatic.... 79
Erysipelas, Relations with Cerebro Spinal Meningitis, Dr. B. Rhett on.... 137
Ethiops Mineral in Cholera, M. Cadet on....60, 362
Eucaliptus Globulus, new remedy.... 77
Exhaustion, Cerebral.... 173
Experiments of Prof. Jones on Black Vomit and Blood in Yellow Fever.... 333

Face, Gunshot Wounds of, Dr. Middleton Michel on....97, 142
Face, Analysis of Bones of, Dr. Warner.... 26
Faget, Dr. J. C., Views on Yellow Fever.... 329
Femur, Structure of Neck of.... 372
Fever, Dr. Geo. Douglass on Hemorrhagic Malarial.... 240
Fever, Dr. T. P. Bailey on Malarial.... 243
Flint, Review of Practice by.... 348
Fibrine as a Diet.... 275

PAGE.
Fistula, Vesico Vaginal, Review of Agnew on..... 358
Food, Artificial..... 275
Fœtus, Yellow Fever Communicated to, Dr. Jos. Jones on..... 119
Forster, Dr. Alex., case of Purulent Diathesis..... 245
Fracture of Sup. Maxillary, Dr. J. P. Wall on..... 322
Fracture of Clavicle, new method of treating..... 369

Geddings, Dr. J. F. M., on Catarrhal Pneumonia.....7, 126, 305
Gibbes, Dr. R. W., Wound of Tongue and Ligation of Artery..... 19
Gibbes, Dr. R. W., on Ligature of Left Primitive Carotid in Aneurism of Neck..... 344
Gilmore, Dr. J. F., on Yellow Fever..... 212
Glycerine, use of..... 278
Gynæcology, Review on..... 247

Hare-Lip, Modification of Operation for..... 368
Harris, Dr. J. C., on Climate and Malarial Fevers..... 66
Hava, Dr. Jean C., Views on Yellow Fever..... 331
Hamilton, Review of Practice of Surgery..... 47
Headland on Action of Medicines..... 363
Heart's Tone, Origin of..... 72
Heart Tricœlian..... 74
Heart, Murmurs in..... 77
Heart with Five Cavities..... 372
Hemorrhage, Ergotin in..... 275
Hemorrhoids, Treatment of..... 367
Hernia, Aspirating Puncture in..... 176
Holt, Dr. A. C., Views on Yellow Fever..... 333
Hydro-Therapeutics..... 174

Inflammations, Secondary..... 177

Jennings, Dr. J. Beatty, on Epidemic Cerebro-Spinal Meningitis..... 223
Jones, Prof. Joseph, Yellow Fever and Small Pox on Fœtus..... 11
Jones, Prof. Joseph, on Treatment of Yellow Fever, and views of himself and Southern Physicians.....193, 328
Jones, Prof. Joseph, Experiments upon Living Animals with Blood and Black Vomit of Yellow Fever Patients..... 333

Kinloch, Dr. R. A., on Yellow Fever.....208, 304
Kinloch, Dr. R. A., on Femoro-Popliteal Aneurism by Antiseptic Ligature..... 218

LaBorde, Death of Prof..... 375
Lacerations of Female Perineum, review of Agnew on..... 358
Ladd, Dr. C. H., on Cerebro-Spinal Meningitis..... 44

Magnesia as a Surgical Dressing..... 369
Magnesite Dressing..... 176
Malarial Fevers, Dr. J. C. Harris on..... 66
Malarial Fevers, Dr. Geo. Douglass on Hemorrhagic..... 240
Malarial Fevers, Dr. S. P. Bailey on Chlo. Hydrate in..... 243
Mammary Abscess, Treatment of..... 373
Marine Hospitals..... 70
Maxillary Sup. Amaurosis from Fracture of, Dr. J. P. Wall on..... 322
Michel, Dr. Middleton, Pathological History of Gunshot Wounds of Face.....27, 142
Michel, Dr. Middleton, on Yellow Fever..... 204
Michel, Dr. R. F., on Epidemic Yellow Fever in Montgomery, Ala..... 289
Military Institute, Carolina..... 376

PAGE.

Milk, Enteric Fever caused by..... 370
Mims, Dr. S. S., on Surgery in Country Practice..... 325
Mosquito Netting, Surgical Dressing..... 281

Nares, to Plug..... 177
Natural History and Limits of Yellow Fever, Dr. J. M. Toner on..... 336
Necrology.....375, 186
Neuro Physiological History of Gunshot Wounds of Face, M. Michel, M. D.....27, 142
Nightmare, cause of..... 175
Norris, Review of his Contributions to Practical Surgery..... 360
Nott, Death of Dr..... 184

Obstetrics, Review of Atlee's Address in..... 247
Ogier, Dr. T. L., on Yellow Fever..... 205
Opium, Aspirator in Poisoning by..... 371
Otis, on Strictures of Urethra..... 54
Ovariotomy, M. Sims on..... 81

Palpation, Rectal..... 82
Pathologico Therap. Studies on Catarrhal Pneumonia, J. F. M. Geddings on..7, 126, 305
Pelvic Pains, Electricity in..... 179
Perineum; Lacerations of..... 179
Physiological Laboratory, Hand-Book of..... 162
Phthisis, Treatment of Acute..... 370
Placenta, Retained, to Remove..... 374
Plaster Bandage, to Remove..... 280
Pneumonia, Catarrhal, Dr. J. F. M. Geddings on.....7, 126
Porcher, F. Peyre, Treatment of Yellow Fever..... 199
Post Mortem Examinations..... 165
Pregnancy in the Aged..... 281
Prolapsus of Uterus..... 179
Psoriasis, Acetic Acid in..... 173

Quarantine, Dr. H. C. Brown on..... 62
Quinine, Substitutes for..... 76, 75, 77
Quinine, by the Rectum..... 278

Rectal Palpation..... 82
Reynolds, Dr. Mark, on Southern Medicine..... 133
Rhett, Dr. Benj., on Typhoid Fever..... 15
Rhett, Dr. Benj., on Cerebro-Spinal Meningitis and Erysipelas..... 137
Richmond and Louisville Medical Journal, Attack of..... 287

Salutatory..... 1
Satchwell, Dr. S. S., Address of..... 99
Scarification of the Gums..... 181
Small Pox, Effects on Fœtus, Jones on..... 119
Small Pox, Iron in..... 172
Small Pox, to Prevent Pitting in..... 174
Smith, Dr. S., "Doctor in Medicine"..... 70
Specialties, Barnes on..... 371
Spermatorrhœa, Treatment of..... 365
Southern Medicine, Dr. M. Reynolds on..... 133
Stockings, Used in Surgery..... 178
Stomatitis, Ulcerative..... 278
Surgery, Review of Hamilton's..... 47
Surgery, Review of Erichsen's..... 150

PAGE.
Surgery, Review of Norris's Practical 360
Surgery, Review of Bryant's 261
Surgery, Dr. T. S. Mims on, in Country Practice 325
Surgical Dressing, new 281
Surgical Dressing, Magnesia as 369
Strictures of Urethra, Otis on 54
Strictures of Urethra, to Dilate 279
Syphilis, Mercury in 78

Toner, Dr. J. M., Natural History and Geographical Limits of Yellow Fever 336
Touatre, Dr. Jno., Views on Yellow Fever 330
Tongue, Wound of, by Dr. R. W. Gibbes 19
Tonsils, enlarged 175
Trousseau's Lectures on Clinical Medicine 364
Tumours, Alcohol in 178
Turner, Dr. John M., on Pathology and Treatment of Dyspepsia 316
Typhoid Fever, Dr. Benj. Rhett on 15
Typhoid Fever, Ice in 174

Urethra, Otis on Strictures of 54
Urine, Chloral in Incontinence of 171
Uterus, Dr. S. Baruch on Subinvolution of 38, 113
Uterus, Prolapsus of 178
Uterus, Flexions of 180

Varicocele, Treatment of 366

Wall, Dr. J. P., on Amaurosis from Fracture of Sup. Maxillary 322
Wamer, Dr. W. D., Analysis of Bones by 26
Women, Review of Athill on 157
Wood, H. C., on Fresh Water Algæ 168

Yellow Fever, Dr. H. C. Brown on 62
Yellow Fever, Effects on Fœtus, Prof. Jos. Jones on 119, 193, 328, 333
Yellow Fever, Correspondence of Prof. Jos. Jones with Southern Physicians on Cause of 172, 193, 328
Yellow Fever, Prof. Jos. Jones on 193
Yellow Fever, Dr. F. P. Porcher on 199
Yellow Fever, Dr. M. Michel on 204
Yellow Fever, Dr. T. L. Ogier on 205
Yellow Fever, Dr. R. A. Kinloch on 208
Yellow Fever, Dr. J. F. Gilmore on 212
Yellow Fever, Dr. D. W. Brickell on 217
Yellow Fever, Dr. J. C. Faget on 329
Yellow Fever, Dr. John Touatre on 330
Yellow Fever, Dr. A. L. Holt on 333
Yellow Fever, Dr. J. C. Hava on 331
Yellow Fever, Dr. R. F. Michel on Epidemic in Montgomery, Ala 289
Yellow Fever, Experiments on Blood and Black Vomit of, by Prof. Jos. Jones 333
Yelllow Fever, Natural History and Geographical Limits of, by Dr. J. M. Toner 336

THE CHARLESTON

MEDICAL JOURNAL

AND REVIEW.

(NEW SERIES.)

VOL. I.] CHARLESTON, S. C., APRIL, 1873. [No. 1.

ART. I.—*Re-establishment of the Charleston Medical Journal.*

To the Medical Profession.

THE publication of a new journal here would seem at first view a hazardous undertaking, if we were not assured of the support of a large number of professional gentlemen at the South and elsewhere, who will aid us by their pens, and some of whom have already sent us their subscriptions. We hope that many others will forward their names, and we cordially invite them to contribute to our pages.

But it is not true that this journal is new or unheard of, for it has been long and widely known in the past—sixteen volumes having been nearly completed when its publication was interrupted. We may be permitted to state on this occasion that one of us had been associated in its management during five years of laborious editorial care; a large edition (attested by the doubling of the subscription list) was issued before the conclusion of our connection with it, and the Journal was received in every State of the South and West. Both of us, also, were engaged in maintaining a correspondence with it during an absence in Europe.

We believe that we can say with truth that though the articles in *any* periodical must necessarily vary in merit, there was no journal in this section of our country the files of which have been and are at this moment more frequently searched and quoted from. This is not because its former conductors, Prof. J. Lawrence Smith, (the distinguished chemist, formerly of Charleston, who was mainly instrumental in originating the Journal in conjunction with Dr. Sink-

ler,) Gaillard and DeSaussure, Cain, Happoldt or Bruns, were not only men of more than ordinary attainments, but that they worked diligently and faithfully; and much more than this: they were brought up and trained in the old conservative manners and in a school of the past when other institutions quite different from the present existed. Our editors just named were guided by a fine sense of professional courtesy, they gave to the Journal a high tone, and based its conduct on the strictest rules of medical ethics. They also secured and presented the contributions of some of the ablest men of the country, both North and South, who were familiar with the subjects upon which they wrote. Among these were the names of such writers and observers as Bachman, Morton, Hume, Dickson, Geddings, LaRoche, Nott, Fenner, Simons, Wragg, Coffin, Frost, T. G. Thomas, S. W. Mitchell, Toland, Dacosta, Arnold, Atlee, Moultrie, H. W. Ravenel, and others younger than these who have since risen to merited distinction. It was through the humble instrumentality of one of us that the whole discussion upon the "Unity and Diversity of the Races" was begun between Drs. Bachman, Morton, Nott and Gliddon. The Charleston Journal embodying papers on race, climate, natural productions, yellow and other fevers and diseases endemic here, it now contains, in common with others, the original observations and materials from which the medical history of the diseases of the South will be constructed. Its pages must therefore be daily appealed to for such invaluable records. The Review department also received special attention, and elaborate notices of new publications prepared by by its editors or their friends appeared in each issue. The meteorological, statistical and mortuary reports furnished by Simonds, of New Orleans, Dawson, Johnson and others were very full.

It is useless then for any one to say that there is no need to re-establish it in this important commercial emporium of the South, and in this ancient city by the sea, which has attained a fame greater than it had in earlier days, when it was the centre of the highest social refinement; when the high standing, if not the superiority of its institutions of learning, its position, its resorts of amusement, the quaintness of its architecture and other attractions and peculiarities drew to it students, tourists and others who came from motives of business or pleasure.

Through the instrumentality also of the important work just cited which was performed in the past by contributors and editors, our enterprise will we trust find many who will be interested in its future progress. As an indication of this interest it may be stated that when one of us determined to attempt its re-establishment, and early in November issued the initial circular, we were fully sustained by an immediate response from a large number of subscribers.

The opinion that periodicals and journals are not largely taken by our people since the war is the result of superficial or limited

observation and is contradicted by recent experience. We cannot often afford to procure the expensive books now published; but it is known to us personally that agricultural and other magazines have been more widely subscribed to than ever before and some of them publish editions of 4,000 to 8,000. As Victor Hugo says: men formerly wrote in stone—their ideas were represented in massive Cathedrals or expressed in stupendous Domes; but now printing has "volatilized thought." To-day the Press rules the land. The great journalists are almost throned as kings, and when they die their bones are committed to the dust as if with the stately ceremonial usual at the demise of monarchs, and the ruler of a great power and all his chiefest men beg to be of the audience.

Professional gentlemen at all sensitive to the dignity and responsibility of their position, as well as those engaged in the varied occupations of life who are desirous of keeping pace with the advances made by their compeers, are more keenly alive than ever before to the incessant progress of the age; they patronize periodicals and papers published at the North to a great extent. Physicians whether living in towns or in the rural districts depend upon and must have a local medium for the expression of their opinions and for obtaining local information, which interests them more nearly, and which presents also abstracts, translations from foreign journals and condensed facts contributed by the workers and thinkers throughout the civilized world. They will have papers on art, science and literature which exhibit the wonderful development made in the investigation of the several departments of nature: researches in experimental philosophy, in physiology, pathology and practical medicine, and in everything which concerns the physical and intellectual progress of man in this age of extraordinary activity. It is an age in which Simpson, Virchow, Richardson, Bird, Beale and Robin, Velpeau, Müller, Watson and Sims, Robert Brown, Owen, Agassis and Darwin, Liebig, Hoffman, Wurtz and Bunsen, Faraday, Tyndall, Huxley, Morse and Maury, Whewell, Mill and Herbert Spencer, Niebuhr, Macaulay, Froude and Motley, Kane and Franklin, Hartstene and Sabine, Stephenson, Lesseps and Rollins, Livingstone, Speke, Grant and Baker, Leverrier, Adams, Proctor and others,—some of these men of genius—all possessing great talents and industry—have extended the use of pure reason, so that even at this date they have actually exalted our conceptions of the power of the human intellect. With minds trained to the highest point of perfection, or sharpened and sustained in their reasonings by researches in experimental physics and by the aid of mechanical expedients, they seek to determine the hidden laws of organization, the forces of life or the composition of matter; or they penetrate the depths of space where their speculations become lost to ordinary vision; yet amid these delicate investigations or from this remote distance—as from a new starting point—these men, sprung of the "daring race of Japeth," again search farther

and deeper into mysteries still more recondite, again launch forth their thoughts to regions still more impenetrable, and guided by some little instrument (like the spectroscope) or by a masterly use of the imaginative faculty applied to philosophic purposes, they return laden with new truths and bearing back solid and useful discoveries to enrich the nations.

Let us recapitulate in part what they attempt or accomplish: They do not fear to grapple with the most profound metaphysical speculations which explain the operations of the understanding and of the human reason—our perceptions, sensations, feelings and volitions; they would establish the rules of ethics, the more subtle, delicate and refined æsthetical axioms and dogmas which govern the taste and judgment in music, the arts, belles lettres, literary compositions, etc.—together with those higher and wider principles of jurisprudence and of law, civil, common or international, which, outside of Christian morals, regulate and decide the affairs of men, or control the polity of governments and bring the greatest good to the greatest number. There is scarcely a question in social philosophy or the history of civilization so difficult that they cannot calculate its elements in their bearings on the life, progress and destiny of mankind. There is scarcely a problem in physiological, organic or analytical chemistry with regard to assimulation, nutrition and reproduction, or the elemental nature of substances, so intricate that they cannot explain it; no atom so minute that they cannot discern it, or any germ so infinitesimal that they do not examine its stages of birth, growth and decay; no kingdom of nature so vast or diversified that they do not reduce it to system and order—no mathematical law so complex or difficult that they do not comprehend and apply it. For the scientific men of our day it seems as if chaos never was. They cannot wholly lift the curtain which conceals unfathomable mysteries wisely shrouded from our view, nor see through the light film of darkness which still broods over the face of the waters; nor can they perceive the infinite power and wisdom which created, rules and directs—but they seek to *interpret* all which is *done* and which *exists*. They open to our inspection the primordial structure which underlies the organisms of plants and animals, whether it be in the tender blade of grass, the opening petals of the lily, or in the ovum of the chick,—a mere dot in point of space, but possessing and enclosing all the rich possibilities of the mature animal; they explain how bone is formed, cells "proliferate" and tissues are reproduced; they search out, gather and publish information hidden from the common view, with regard to the productions and rich resources of the countries, or teach us the value of the commodities, some of them buried in the earth, which are peculiar to every quarter of the globe; they show us what minerals or gases compose the sun or the stars; they mark, map out and weigh the wandering constellations, or note and portray those nebulous mists of crowded and thick-set worlds which, like vast

serpents translated to celestial regions, train their sinuous lengths athwart the skies; they reach a line unto the bands of Orion, and observe the influences of the Pleiades; they trace the perturbations caused by the immense bulk of Jupiter with the revolutions and eclipses of his satellites, the varying hues on the belts of Saturn and on the zones of Mars, the inclination of the axis and the order of the seasons of Uranus; they calculate the orbits of those imponderable masses, in thinness like a whisp of cloud which sometimes stretch from the zenith to the pole and which "from their horrid hair shake pestilence and war;" or those burning meteors which sweep in fiery bands through the heavens. They will watch from widely remote points the moments of the transit of Venus and will gain new and precious elements by which to determine the sublime magnitudes, the distances and the velocities of the orbs which circle through the voids of space. They observe and record the dip and the oscillations of the magnetic needle everywhere—whether around the stormy headlands of the Northern seas, in the inhospitable Caucasus or upon the frozen steppes of Tartary; and compute their relations with the periodic appearance of the vast caverns in the face of the sun, or with those gorgeous lights (like a brilliant coronal) which shoot forth their shafts of flame around the Northern pole, to illumine the Arctic winters, or flush the Southern skies; they tell us how the drops of dew and the frosts which clothe the fields are begotten, from whence the storms arise and the hail is fashioned, when and where the winds blow and the rains and snows fall—"how out of the South cometh the whirlwind and cold out of the North;" where the light dwelleth and what it is—with what colors it paints its exquisite pictures on the eye, or how the ear trembles to the lighest beatings of the waves upon the sea of ether which encompasses us.

It is the men of art who sink through thirsty deserts wide reservoirs of water with which to float great fleets and save ten thousand miles of portage; who pierce a way for traffic through the heart of mountains, or span broad friths with iron tunnels that do not thrill or quiver to the roar of a thousand laden trains sped through them; who contest with Herodotus and Cæsar the palm of explaining the great hereditary problem ("*Nili quæreri caput*") which has vexed the curious spirits of the world since the dawn of history; who decipher and read the long forgotten but unobliterated languages and characters of wonderful nations which have passed out of the memory of man.

It is they who teach the ships to thread their devious ways through the calm roadsteads which lie amid boisterous seas. It is they who have abolished the sense of suffering and interpose sleep and pleasant dreams in place of pain. They who have annihilated space and time—who whisper through the depths of the ocean and whose voices are heard in a moment across the continents. Nor will they cease till they have crowned their efforts: till the pestilence is

stayed from cities and from the abodes of men; till they *compel* governments to enforce cleanliness, to drain marshes, to *abolish the preventable causes* of disease; and thus in their quiet libraries or work-shops, where their great thoughts are produced, and their values practically tested—less noisy and less pretentious than demagogues—they will prove, as they ever have been, greater benefactors to their race than kings, warriors or potentates.

Physicians who stand "in the place of parents" to the people, and who do not acquaint themselves with these marvellous advances in the medical and in the physical sciences should certainly repair the omission.

So far as ourselves are concerned, with a profound distrust of our abilities, we hope that through the moral and material support given us by our brethren, to be increased we trust in the future, we may be encouraged to use our best exertions to sustain the high and useful character which we have stated that the Charleston Journal had in the days long past. When that mighty struggle was entered into which has dissipated our fortunes it did not despoil us of everything—it strengthened our energies and added to our powers of endurance. Like Gideon's wearied but undaunted troop, we are "FAINT YET PURSUING!" It also gave to the men of our profession some inestimable advantages, viz: much experience acquired in the rough and bloody school of war when placed in charge of large military hospitals contiguous to battle-fields, where our brothers, wearied and broken by disease or torn and mangled by wounds were brought in from the front and they appealed to our sympathy and looked to us for assistance. Then also the humblest assistant surgeon in the trenches (unlike he who occupied cathedral places, disbursed supplies, or sought to increase his ease or his gains,) had acquired through sheer necessity the most practical and personal experience of medical and surgical maladies.

It is these men who are now scattered throughout our country and who are possessed of such hard won knowledge, that we hope to engage in aiding our enterprise; and to them—as to old comrades—as well as to others, we confidently appeal. The bravest are always the truest and the most generous!

F. PEYRE PORCHER, M. D.
R. A. KINLOCH, M. D.

ART. II.—*Pathologico-Therapeutic studies on "Catarrhal Pneumonia," Syn. Broncho. Vesicular, Lobular, Disseminated, Insulated Pneumonia, &c.* By J. F. M. GEDDINGS, M. D., Prof. in Medical College of State of South Carolina. Charleston.

AMONG the diseases of early childhood, catarrhal pneumonia, occupies undoubtedly as important a position as the croupous or fibrinous variety in the adult. Presenting pathologico-anatomical characters, differing essentially from those of the croupous variety, having a clinical course, also materially different, it appears surprising that for so long a time the two diseases should have been considered as identical. This confusion has tended in former times and unfortunately still tends to the production, in medical writings, of descriptions, clinically and anatomically inexact and untrue to nature.

The consideration of a large number of exact and careful observations, compels us to admit that the two forms of pneumonia present essential differences, both clinical and anatomical and that they must be treated of as separate diseases. Wherein these differences lie, I will endeavor to elucidate, as briefly as may be, in the following pages. At the very outset however, I beg to be understood as laying no claim for originality of the subject matter under investigation.

The frequency and danger of catarrhal pneumonia, in the earlier years of childhood, seem to have first attracted attention during the course of the present century. For a length of time the correct significance of the complicated antecedent conditions of the malady, was misinterpreted in consequence of the false ideas, in relation to the nature of acquired atelectasis. In consequence of the collapsed portions of the lung being considered as inflammed and in view of the constancy with which such atelectic points were found in the lungs of children, the earlier pathologists came to the conclusion that pneumonia was almost as constant an occurrence. The natural result of this confusion was that the clinical reports of cases and the delineation of the disease were obscure, inaccurate and unrecognizable, especially so from the neglect or mistrust of the coincident physical signs. The excellent and trustworthy works of Legendre and Bailly, of Seifert, West and others, throw considerable light on the nature of atelectasis, but it is to Reilliet and Barthez that we owe the more exact description of the pathological lesions incidental to catarrhal pneumonia, a more accurate clinical picture, and especially for having demonstrated the possibility of assured correctness of diagnosis, by physical exploration of the chest. To Bartels, (Virchow's Archiv, xxi., 1-2, 1861,)—[I have not recently had access to this work, the only-available

copy having been burned in the sack of Columbia, 1865,]— we are however indebted for having first subjected catarrhal pneumonia (a frequent sequel of measles) to critical and thorough investigation, both as to its pathologico-anatomical and its clinical relations, and for having materially elucidated its most important characters.

PATHOLOGICAL ANATOMY.

Having had but few opportunities of studying the pathologico-anatomical characters of catarrhal pneumonia, I will use the excellent description of the lesions in Ziemssen's classic work (Pleuritis ú. Pneumonic im Kindesalter, 8 vo., Berlin, 1862, p. 293, et seq.,) for the elucidation of this part of the subject. The material for his observations, was furnished by 98 cases of catarrhal pneumonia, of which 32 were the result of acute and chronic bronchial catarrh, 23 of whooping cough and 43 the sequelæ of measles. Of these 98 cases, 20 were examined post mortem, furnishing the data for the description of the anatomical lesions.

The most constant lesion, present in nearly all cases, was intense catarrhal inflammation of the bronchial mucous membrane, less marked in the trachea and large bronchi, but intensely developed in the minor bronchi and in the bronchioles. In extent, this bronchitis was found generally diffused, but not with the same intensity except in the severest cases, in which it was uniform as to grade and extent in all the bronchioles. In mild cases only the tubes of the lower lobes, exhibited the condition, of high grade of intensity. The mucous membrane was found, inordinately red, swollen and covered with a viscid muco-purulent secretion containg but few air bubbles. Bartels (op. cit.) whose cases were more recent found on the contrary, the mucous membrane covered by a sticky vitreous secretion, or with mucous mixed with abundant air bubbles. The quantity of this secretion diminished with the calibre of the tubes, so that in the finest bronchioles no secretion at all was found, only the redness, swelling, &c., could be seen. When what Ziemssen terms "bronchiolitis" had existed for a length of time there was found almost constantly, cylinderical dilatation (ectasis) of the tubes, often attaining considerable development. The dilated tubes contrasted markedly with the narrow entrance, preserving the normal calibre, or contracted by swelling of the mucous membrane. The lining membrane of the ectatic tubes was of a brownish red color, the parietes were thickened and rigid and to such a degree, that, on section of the pulmonary parenchyma, the cut ends of the bronchi projected beyond the surface of section, as whitish-yellow nodules. The contents of these bronchiectases consisted of a purulent, in some cases dirty reddish, secretion, without admixture of air bubbles. Microscopically examined the morphotic elements were found to be pus corpuscles, and mucous

and ciliated epthelium. "The admixture of ciliated epithelium was so abundent and so much care was used in the removal of the secretion, so constantly and uniformly present, that it cannot be doubted but that a moderate shedding of cells must have occurred during life."—*Ziemssen.* [Positive as is this statement and made by such high authority, I cannot receive it without demur. As often as I have examined microscopically the secretion of chronic bronchial catarrh, both as sputa and as taken from ectatic tubes after death, I have never been able to detect ciliated epithelium. In fact the catarrhal process, in its chronic form precludes the possibility of the regeneration of the normal ciliated epithelium, which is necessarily cast, early in the disease. Can the epithelium thus cast remain for any length of time unaltered or recognizable? I think not. In the imperfect epithelial layer, covering the mucous membrane of ectatic tubes I have only been able to recognize young, indifferent or transition forms.]

In very old cases the secretion was so inspissated as to be susceptible of removal from the slit bronchi, like fibrinous casts, or it could be washed out, in their dendritic continuity, by a stream of water. The microscopic examination showed, that, these cast like masses were not fibrinous, but composed of inspissated purulent secretion.

In the lungs of children dying after severe whooping cough, of several weeks duration, Ziemssen found a peculiar alteration of the pulmonary parenchyma, which he considers as a more advanced developmental stage of the conditions already described. In the midst of the collapsed (atelectic) lung tissue he observed numerous white nodules, which were raised abruptly, above the dark violet colored pleural surface. To the touch, these nodules were round, resistent, and varied in size from a small pin's head to a millet seed. The bronchus leading to a collapsed point, carefully laid open, until the nodules were reached, showed that it was connected both laterally and terminally with the nodule. On section or when pricked from the pleural surface, in some cases, a creamy, purulent secretion could be squeezed out, leaving a round or irregular cavity. Most frequently, however, the consistence was greater, similar to that of cheese and capable of being cut into sections for miscroscopic examination. This examination showed that the bunch of alveoles involved was expanded to a greater or less degree and filled with the same morphological elements (pus and mucous corpuscles, epithelium, &c.,) as the dilated bronchi before adverted to. The alveolar epithelium was preserved, but exhibited traces of fatty degeneration. Formerly these nodules were considered as pneumonic and by some described as tubercles. That they are not due to pneumonia, is evident from the absence of all signs of inflammation in the vicinity, in lung or pleuru. The result of the microscopic examination disproves their tubercular origin. As far back as 1840, Fauvel (*Recherches*

sur la Bronchite) suggested that these nodules were due to the propulsion of the bronchial secretion into the alveoles, during forced expiration, with partially closed glottis and subsequent mechanical dilatation, together with inspissation of the secretion.—(*Ziemssen.*) This suggestion gains in plausibility, from the fact that the lesion in question is only found after long catarrhs (pertussis, &c.,) accompanied by violent and paroxysmal cough, or precisely in those cases, in which we find atelectasis, from obstructed bronchi of most frequent occurrence. The mechanism by which the condition is brought about seems to be sufficiently simple. A mucous plug, &c., obstructs partially the bronchus leading to a lobule, the next forced expiration suffices to expel the air in the group of alveoles, or it is removed by absorption, the resistence being thus enfeebled, a violent paroxysm of cough, a forced expiration, with a constricted glottis, acting on the column of air in front of the obstacle, forces the secretion of the bronchial tube into the empty alveoles. The fluid may not at the time be sufficient to distend the alveoles, it may be added to from time to time by the same mechanism, or it may give rise to secretory irritation of the alveoles themselves and lead to abnormal dilatation much in excess of that observed in forced inspiration. This mechanical implication of the alveoles, occurring in cases of whooping cough constitutes the first link in the chain of structural lesions of the pulmonary parenchyma, which characterizes catarrhal pneumonia, as it follows as sequel of tussis convul. and other chronic affections of the bronchial mucous membrane. In these cases it is the acquired atelectasis, which plays principal role in inducing those nutritive changes of the lung tissue, which eventually lead to the development of inflammation in the collapsed lobules. In relation to the appearances of the atelectic lobules much need not be said. They are so distinct as to strike the observer on even superficial examination. They are characterized by a bluish red or violet color, are depressed below the level of the surrounding normal parenchyma. When an entire lobe, or a large portion of one, is collapsed, the volume of the affected portion is sensibly diminished. To the touch it is flabby, wrinkled, does not crepitate when cut or handled, &c. When recent the collapsed parts may without difficulty be inflated, furnishing an important characteristic, whereby to distinguish the atelectic lobules from those consolidated by croupous pneumonic process. By insufflation, we can, in recent cases, restore, easily, the normal condition of the affected lobules. The normal volume is restored, the heretofore dark red or violet points become light red, as in health; the section which exhibited but little blood and no air bubbles, now yields both abundantly on pressure.—(*Ziemssen.*) When the Atelectasis has existed for some time, the collapsed lobules become the seat of considerable hyperæmia, and a section gives rise, on pressure to an abundant flow of bloody

serum. Insufflation is still possible, but not without the exercise of considerable force. The insufflated lobules, when cut into, are found to be of a scarlet red color, indicating the existence of intense hyperæmia. In a still later stage, when the bronchial secretion has been propelled into the alveoles and has become thickened, intense sufflation is still possible, not without great effort, and then only incompletely. Individual lobules remain uninflated, dense, on section are found smooth, shining, and a careful examination always shows the corresponding ectatic bronchus, plugged with inspissated secretion.

The lesions so far adverted to are to be considered, according to Ziemssen, as the first stage of inflammatory disturbance of nutrition, leading to the development of catarrhal pneumonia.

In the examination of the lungs of dead children, the test by insufflation, should never be neglected, for by it alone are we enabled to distinguish between collapsed lung tissue and pneumonic consolidation. Says Ziemssen: "On section, the normal air containing, or the emphysematously distended, alternate with the dark, red, solid lobules, giving rise to the marbled surface of section, equally characteristic of both processes."

In regard to the most frequent seat of atelectasis, my own experience tallies with that of Ziemssen, Bartels and others, viz: in the posterior lower area of both lungs. The atelectasis is in typical cases, manifest in a stripe of one or two inches in breadth, extending upwards through both lower and upper lobes, to the apex, lying between the posterior vertebral edge and the posterior border of the axillary space, limited abruptly, by healthy lung tissue before and behind. In a case recently (1871) under treatment this limitation of the affection was manifest, on physical exploration, during life. Not less frequently, the lower edges of the inferior lobes were found by Ziemssen in a collapsed condition, and in old cases, the anterior edge of the middle (left) lobe, or that portion which covers the heart. The following is a description of the almost constant appearances on opening the thorax:

"The tips of the superior lobes were collapsed, whilst the whole anterior superior portion, as well as the anterior edges were emphysematously dilated. The inner half of the middle lobe (left) as well as the inner tip of left upper lobe, was atelectic and reduced to the smallest volume. In cases presenting the greatest extent of atelectasis, not only were both lower lobes collapsed, void of air, reduced in volume and drawn back, to such an extent, as not to be visible anteriorly, but also the inner portion together with the anterior tips of middle lobe were implicated. In no case was the atelectasis of this extent without showing numerous points of pneumonic inflammation, disseminated throughout the atelectic area. The remaining lung tissue, containing air, which in extreme cases (such as occurred from violent and protracted whooping cough) limited to anterior portion of superior lobes, was the seat of

emphysematous dilatation of the alveoles, with here and there evidences of considerable inter-lobular and subpleural emphysema. The anterior edges of the lungs were dilated and rounded as low as the fourth rib, remaining in apposition or overlapping each other, after opening the chest. The parenchyma of the emphysematous portions appeared on section, pale exsanguine and in some cases, here and there, in the centre of the lobes, were found isolated, collapsed lobules. In the atelectic portions of the lungs, vicariant emphysema and emphysematous caverns were found, but in small numbers." A frequent lesion, found in many of these cases, consisting of subpleural echymoses, varying in size from a pin's head to a five cent piece. They were usually found over the collapsed lung, and especially on the posterior lower surface. On section they were found to be located between the pleura and lung tissue and to be developed at the expense of the latter. These echymoses are also mentioned by Bartels as frequent in the catarrhal pneumonia following measles. The pleura covering the collapsed portions was found normal in recent cases; in those in which the pneumonic process was already established it was strongly injected, cloudy and lustreless.

The lesions heretofore described may be considered as the constant and necessary conditions for the development of what we designate as catarrhal pneumonia. The catarrhal pneumonic process has its origin in the majority of cases (not by any means in all) in the collapsed parts of the lung, and especially within the area of the posterior portions of the lower lobes. The following is the process of development: The wrinkled, relaxed character of the atelectic parts gradually disappears, they become denser, more resistent, and increase in volume. By touch we recognize distinctly hard, resistent points imbedded in the atelectic lobules. On insufflation the atelectic lung tissue lying between these hard points or nodules can be easily inflated, but the nodules preserve their hard, resistent feeling and cannot be distended. When examined at this early stage, these nodules, after the surrounding tissue has been inflated, are found to be due to a dilated bronchiolus and alveole, plugged with viscid secretion. On section they have a brownish red color, and the surface of section is smooth and glassy. Microscopic examination shows that the pulmonary tissue preserves its integrity, but that the alveoles are distended with large cells, generally with a single neucleus, rarely with several; there is also present a small quantity of molecular fat (detritus). The epithelium of the alveoles is preserved, but exhibits commencing fatty degeneration.—(Ziemssen) As the process advances, the nodules coalesce to form larger areas of infiltration, often of considerable size. Thus the infiltration, at first discrete, may, by coalescence, involve the entire posterior portion of the lower and upper lobes. On section these lobes appear of an intensely brown, red color, contrasting strongly with the remaining

healthy lung tissues. The consistence of the inflammed parts is diminished, it is dense but friable. On pressure a small quantity of bloody, sticky fluid may be squeezed out.

The infiltrated lobules do not long preserve the above appearances. The discrete nodules soon commence to decolorize in the centre, whilst the periphery still preserves its dark red-brown color; so that when the process advances and the decoloration reaches the periphery, the boundary between the healthy and diseased points becomes less distinct. In other lobules, the decolorizing having advanced from centre to periphery, they appear as almost colorless islets, surrounded by a narrow brownish-red border. Soon the decolorizing is complete, and the affected lobules assume a dirty white or greyish hue. The lung tissue in this condition is inordinately soft and friable, so much so, that, the finger penetrates without difficulty. The microscopic examination of the puriform fluid obtained by pressure, as well as of sections of the pulmonary parenchyma, demonstrates the presence of, besides the above mentioned unineucleated round cells, (which are now found in an advanced stage of fatty degeneration) small granular multineucleated cells in large numbers, also large increase of detritus and free oil globules. Both Ziemssen and Bartels deny the occurrence of fibrinous exudution in the alveoles and bronchioli, such as is always found in ordinary croupous pneumonia.

The farther observation of the process brings us to the anatomical terminations. These may be abscess, tubercular infiltration, &c., precisely as in croupous pneumonia, or as the integrity of the pulmonary parenchyma is in many cases unimpaired, retarn to the normal condition, is possible, as in Pn. of adults—"Restitutio ad integrum."

All the affected lobules, according to Ziemssen, (op. cit. 301,) do not undergo the above metamorphosis. Some, especially the smaller indurations, attain gradually the consistence of cheese, have a yellowish color, and may be cut into microscopic sections, which, when examined, are found to consist of aggregations of fat, oil globules, free neuclei and detritus. This change must be considered the commencement of the cheesy degeneration (Tyrosis). The so-called tuberculization of exudation. It was found most frequently in scrofulous and otherwise cachectic children, appearing to occur within two or three weeks after the commencement of the pneumonia. The final result of this cheesy infiltration, after several months duration of the malady, was in many cases extensive destruction of lung tissue, so that entire lobes were converted into vast caverns, or into greasy yellow masses.

The pleura, over the inflamed lobules, when these were near the surface, was always more or less intensely implicated. The injection of both layers, parietal and visceral, was strongly marked and corresponded in extent with the area of inflammatory induration—coagulated fibrinous exudation was easily scraped off from the

surface of the pleura. Extensive pleuritic effusions were not observed by Ziemssen and others.

In still another class of cases, where the process was more chronic and of much longer duration, another form of parenchymic consolidation is mentioned, as coming occasionally under observation. This is described as being more uniform and dense than in the foregoing, which were found only in the more acute and rapidly developed cases. This form appeared to be strictly limited to atelectic parts. When this consolidation affected an entire lobe, the part preserved its normal volume, felt uniformly dense and hard, exhibiting together with intense injection of both layers of the pleura an inspissated exudation on the surface. When cut into the lung tissue appeared homogenous, pale red or blue, with an uegranulated, smooth, dry, unpolished surface of section. Here and there the parenchyma was decolorized, pale yellow, and had the appearance of being sprinkled with yellow dust. No where in the affected lobe could either air or fluid be squeezed out. The seat of consolidation was, as in the former cases, constantly the posterior portion of the lower lobes, later extending to upper lobes, including apex. "The microscopic examination showed the alveoli filled with cell elements and, in addition, an evident swelling and and infiltration of the interstitial tissue, the connective tissue elements of which were finely granular." In very old cases there was extensive proliferation of these elements, by which bands of connective tissue of new formation, were produced, which traversed in every direction the consolidated lobes. The end result of this condition is, according to Bartels, the production of extensive bronchiectasis and cirrhosis of the lung.

As before intimated, all cases of catarrhal pneumonia are not preceded by the development of atelectasis. Many cases appear to be due to the direct extension of a catarrhal process from the bronchiolic mucous membrane, to the alveoles, without the antecedent occurrence of pulmonary collapse. In this class of cases, which are generally observed following measles, the anatomical lesions are developed somewhat differently from those enumerated above. Up to a certain stage presenting certain peculiarities, which enable us in individual cases to distinguish, if not accurately, at least approximatively, at the autopsy, whether or not the pneumonic process be due to simple extension of the catarrh, or to antecedent atelectasis.

Early in the disease, we find the evidences of acute capillary bronchitis: intense redness with swelling, &c., of the bronchial mucous membrane, the lumen of the tubes being partially filled with a glassy, viscid mucous. In the bronchioli this secretion is absent. This viscid mucous on microscopic examination is found to consist of young unineuclated cells, (probably migrated leucocyths,) and cilated epithelium of the smallest tubes. Steffen (*Klink der Kinder-krankherten*, i., 262,) thus describes the process: "When

the process (catarrhal) extends to the alveoles, there is casting of the epithelium and abundant formation of young cells (migrated lencocyths). Coincidently the surrounding connective tissue is implicated; it becomes hyperæmic, swollen and parenchymatous inflammation is brought about. Soon after the affected lobules become consolidated, firm and may be felt. When deeply seated, the superficial may be seen as well as felt. In form these knots or nodules are round, and frequently not over one-half a centimetre in diameter—sometimes larger. In color they are brownish red. The section of a lung thus affected, when an entire lobe is not involved, (by coalescence of nodules,) presents a marbled, mottled appearance, inasmuch as the brownish red pneumonic nodules are embedded (discretely) in the partly healthy and partly emphysematous lung. When the pneumonic nodules are very numerous and in close opposition, the lung may present the appearance of the hepatization of croupous pneumonia. On section the pneumonic indurations have sometimes a smooth, at other a more uneven surface. Early in disease the surface is dry, but later a small quantity of bloody fluid may be squeezed out. The alveoles are packed full of secretion and consequently void of air, and as the surrounding connective tissue is denser than in the normal condition, the consolidated nodules, when carefully separated from the surrounding healthy lung tissue, sink to the bottom when thrown into water. Insufflation through the corresponding bronchus brings about no change in the diseased lobules, because the air cannot penetrate into the alveoles filled with catarrhal products." The disease having reached this stage of development, the catarrho-pneumonic process does not differ, as far as the anatomical lesions are concerned, from those cases with antecedent atelectasis.

(*To be continued.*)

ART. III.—*Typhoid Fever. Brief views as to its Lesions and Treatment.* By BENJAMIN RHETT, M. D. Abbeville, S. C.

There are certain general features belonging to all fevers, as chill or rigor, followed by increase of heart's action, increase of heat, &c.

The chill or rigor undoubtedly originates in some impression of a depressing character upon the nerves—most probably upon the great sympathetic and vagus nerves. The diminution of vital nerve force is followed by increased action of the heart, inducing an increased matamorphosis of the carbonized and nitrogenized material of the blood and tissues, producing increased elimination of carbonic acid gas by the lungs, and of urea and uric acid by the kidneys and other excretory organs.

The balance between the tissue matamorphosis and the excretion of effete material is not, however, always preserved, and the albuminoid material thrown into the circulation by the rapid tissue disintegration, both prevents due oxidation of the blood in the lungs, and acts as a peccant matter upon the nervous centres—obstructs the capillaries, and induces that condition known as typhoid.

The impression upon the nerves may arise from poisonous matter introduced into the circulation from without, or from matter generated within the circulation itself; or the impression may have a local origin from a wound or injury. Once the impression is made, the depressing influence applied to nerves controlling the circulating organs—increased heart's action follows; and increased heat from increased respiration, and increased tissue change.

Typhoid Fever presents, however, distinctive elements, that characterize and separate it from other fevers. It has its rose colored spots and sudamina, that cause it to be classed with exanthemata or eruptive fevers. But its most distinctive mark is its bowel lesion—its inflammation, ulceration, or sloughing of the solitary and agminate glands of the lower portion of the ileum, and extending into the cœcum.

Of the functions of these glands involved in typhoid or enteric fever, two views have been entertained—one that their functions are eliminatory, their peculiar secretion accumulating within the glands, which burst at maturity and discharge their contents into the intestine; the other view is, that the glands are absorbent, and take up from the chyle their appropriate material. In proof of the latter view, it is said that Brucke succeeded in injecting them through the lacteals. Dr. T. J. McClagan, of Dundee, adopts this view of their absorbent nature, and, furthermore, supposes that their closer aggregation at the end of the ileum is due to nature's provision for the retention of the chyle at that point, in contact with the greater number of absorbent mouths, by the delaying action of the sphincter ilei.

Dr. McClagan accounts for the "*Plaques Molles*" and "*Plaques Dures*" of Louis by assigning the primary lesion, the abundant deposit, and smooth, mucous membranes ("*Plaques Dures*") to primary impression on the first glands involved by the disease. The "*Plaques Molles*," in which the deposit is scanty and the mucous membrane granular in aspect, to inoculation from the sloughs and shreds from the glands first implicated; comparing the first with the specific action of the poison of the scarlatina upon the tonsils, and the other to subsequent inoculation from the sloughs in that disease. The sloughs coming in contact with healthy glands lower in the bowels, causes softening and deeper ulceration in the glands secondarily affected than in those primarily involved—giving rise to hemorrhage and perforation.

Taking this view Dr. McClagan condemns, and I think justly, the advice of Dr. Todd and the general practice of British physicians

"to lock up the bowels and keep them locked," maintaining that the looseness present in most cases of Typhoid Fever is an effort of nature to throw off, by these intestinal evacuations, the sloughs and irritant poisons that aggravate the disease by being retained in contact with these glands. Not that he advocates the utility of an exhausting diarrhœa, but that he objects to the "*locking process.*" He furthermore thinks that cases in which these sloughs are retained in the bowel are more liable to hemorrhage and perforation, the result of the secondary lesion, from inoculation by the retained sloughs, causing deeper ulceration of the bowel.

These views of Dr. McClagan so exactly tally with my own observation in hospital and private practice, that I am disposed to adopt them; but as catharsis in this disease is a delicate operation, easily started, but controlled with difficulty, great caution should be exercised in the use of cathartics. And although I coincide with his opposition to the "*locking process, and the keeping locked,*" yet I hold the view that looseness, whether the result of the disease or the action of medicine, is a weakening process, and should be *restrained within due bounds.*

In the treatment of fevers, there are certain general remedies applicable to all forms—and special remedies, adapted to each disease, and calculated to meet their individual abberations from health.

Sponging, and the bath, to reduce febrile heat, are general remedies applicable in nearly all pyrexias.

Suitable stimulants and food for sustaining the heart's action are also general remedies.

Among most practitioners, although ammonia, camphor, ether, &c., have their place, yet alcoholic stimulants are preferred, as best sustaining the heart's action, and, by their absorption into the circulation, directly reaching the nervous centres; and also for furnishing carbonized material to the blood for lung combustion, thus sparing the fat and tissues of the body; and, further, for their stimulant action upon blood vessels, helping to prevent or overcome capillary obstruction and stasis. Turpentine is also a valuable stimulant, especially with regard to preventing and overcoming capillary obstruction; but it is so valuable as an eliminating diuretic, as well as an anti-spasmodic, relieving the irregular contractions of the bowels and attendant pains, that its stimulant character is often overlooked.

Appropriate food is another general remedy. Just here let us ask what food is appropriate in Typhoid Fever?

In the choice of diet, three things are to be kept steadily in view: First, the powers of digestion are enfeebled; we must, therefore, choose *nutriment easy of digestion.* Next, the blood is loaded with albuminoid material from tissue degeneration; therefore, the diet should *not be too highly nitrogenized,* lest we add to the offending material in circulation, and increase the labor of the

secretory organs. Third, the bowels are sore and irritable: therefore, the food should *be bland.* And again, the ileo-cæcal sphincter is ordinarily in an irritable or inflamed condition, and the opening from the ileum into the cæcum narrowed: therefore, the diet should *be fluid.* This last is no theoretical conviction, as I have known a raisin seed retained ten days, and a small piece of biscuit, although soaked, retained seven days, causing pain and uneasiness in the iliac region

Therefore, milk commends itself as a highly valuable article of diet, being fluid, easy of digestion, and not too highly nitrogenized. Latterly, glycerine has been introduced to the British professional public as a valuable article in the treatment of typhoid fever. It commends itself as being *nutrient, bland, antiseptic, alterative, containing no nitrogen, and preserving its fluidity throughout the process of digestion.* I can add my testimony to its value, having used it with advantage in numerous cases during the present year.

In typhoid, as in other fevers, eliminatory remedies, as cathartics, diuretics, sudorifics, &c., have their uses. Cathartics, as I have already remarked, should be used with great caution in typhoid fever, owing to the predisposition to diarrhœa already existing in most cases of the disease.

Diuretics are of great value—turpentine holds, in my estimation, the highest place, not only possessing diuretic properties of a high order, but controlling the pain and irregular spasmodic action of the bowels, preventing and overcoming capillary engorgement and stasis. I have very little experience with Norwood's Veratrum Viride, yet I should suppose that its value in typhoid fever consists not only in its power to control the heart's action, but also in its diuretic action, and its effect upon the capillary blood vessels.

Conjoined with the above remedial agents, I make use of chlorate of potash and chlorine, for their known action in exciting secretion, keeping the tongue and mouth moist and free from sordes, thereby relieving thirst, promoting the patient's comfort, and facilitating the act of swallowing; also for the well known disinfecting properties of chlorine, and its destructive influence with the lower forms of vegetable and animal life. I will here introduce a favorite formula that has, in my judgment, proved of value in most cases of typhoid fever treated by me during the present year:

℞.

Chlorate Potass	½ drachm.
Hydrochloric Acid	7 minims.
Distilled Water	3 ounces—shake and add
Glycerine	5 ounces.

℥.—

Keep in the dark.

Dose for adult: Tablespoonful every two or three hours—with sponging, milk diet, (in form of milk punch, combining food and stimulant) turpentine, and the above formula.

I have not only conducted cases, with comparative comfort to the patient, to a successful termination, but have even imagined that the period of the pyrexia has been shortened. The only patient lost has been one violating rules and partaking of solid food.

The course of treatment I have adopted and found satisfactory is as follows:

Should the diagnosis be typhoid fever, the treatment is begun by a warm bath or sponging of the surface. Should costiveness be present, some mild laxative is administered, and the patient is put upon the use of the glycerine and chlorine mixture, and a strictly fluid diet—generally milk. Should pain in the bowels supervene, turpentine, ten drops, on a little sugar, is given at short intervals, and poultices are applied to the abdomen—a little turpentine mixed in the poultices, until relief is afforded. Turpentine is also given in the same doses as an eliminatory diuretic, especially when the urine is scanty, and micturition difficult or painful.

When stimulation becomes necessary, it is carried out by means of milk punch, combining the alcoholic stimulant with the nutriment.

Stimulation is deemed necessary as soon as the fur upon the tongue assumes a brownish cast, or the pulse loses its volume, or low delirium appears.

The bath or sponging, to reduce the febrile heat, is continued throughout the treatment, and used whenever the febrile heat is excessive.

Under this treatment strictly followed out the cases seldom assume a severe type.

The Pyrexia is commonly restrained within moderate limit.

The tongue and mouth remain moist, the teeth and lips free from sordes.

The diarrhœa is seldom excessive. Hemorrhage from the bowels is rare. Convalescence often commences in 11 or 12 days from the onset of the disease, and seldom later than 4 weeks. Of course remedies are used to restrain excessive diarrhœa and to procure sleep when wakefulness disturbs the patient. Dovers powder is useful for both purposes, but I find its exhibition seldom necessary, if the foregoing treatment has been faithfully carried out.

ART. IV.— *Wound of the Tongue by a Pistol Ball—Ligation of the Lingual Artery.* By R. W. GIBBES, M. D., Professor of Anatomy and Surgery in the University of South Carolina, at Columbia.

Thomas Tilden, aged 9 years, South Carolinian, of African descent, was accidentally shot February 3d, 1873, from above downwards, while grasping the barrel of a small pistol held by a taller

boy, who stood above him. The ball, after passing through the upper lip, carried away the right superior central incisor and its alveolus, then entered the tongue one inch from the tip, just on right of mesial line, and passed back diagonally, making a wound two inches in extent through the organ, the orifice of exit being on left side, just where the mucous membrane of the floor of the mouth is reflected upon the tongue, and on a level with the root of the second molar. It was impossible to ascertain what became of the projectile, since there was no other wound visible, but it seemed possible, though the boy denied this, that he spat it out after its force had been spent against the ramus or angle of the bone. I saw him about dark—one hour after the occurrence, in a little shanty, on the outskirts of the city, with poor surroundings, there being but one small hand lamp to give light, and little other assistance available. As there was no great emergency—although he was said to have bled pretty freely—I was not inclined to do much at this hour, but in instituting an examination, I rather incautiously displaced a large clot, which was plugging the anterior orifice in the tongue, and this induced such a brisk hemorrhage as to give me trouble, it being perhaps an hour before I succeeded in controlling it effectually, by means of pressure and presulphate of iron in substance. The amount of blood lost at that time, however, was trifling.

4th. No recurrence of bleeding; slept well, and taking fluid nourishment; tongue a good deal swollen, which, however, soon diminished gradually, and boy improved in every way until 11th and 12th, during which two days and nights bleeding more or less profuse took place from both orifices in the tongue, and was with difficulty controlled by pressure and styptics as before. On the 13th, P. M., he had become very feeble, and I passed, for the third time, a long lint-tent, soaked in Squibbs' Solution, through the whole wound, traversing the tongue, and plugging it tightly, making up my mind that the ligation of the lingual artery the next day would afford the only chance for life.

13th—12 M. On consultation with Drs. Taylor, Watson and Hydrick, it was agreed that, on account of his extreme feebleness of circulation, my little patient could not be expected to survive the comparatively easier operation of tying the main arterial trunk in the neck, and that, therefore, the more delicate one of securing the left lingual should be attempted.

The above named gentlemen being present, and giving their assistance, as well also as Messrs. Bell, Jackson, Hill and Anderson, of the medical class in the University, chloroform, after a drink of brandy, was cautiously administered by Dr. Hydrick (not without misgivings, I must say, on account of his great debility). The patient being supine, with his face turned to the right, chin held up and head drawn a little back over a small pillow rolled under his neck, an incision was made about one and three-quarter inches in

extent, just over and nearly on a line with the left corner of the hyoid bone. After the integument, platysma and superficial fascia had been divided, the sub-maxillary gland, much enlarged, was held up by Dr. Taylor with a blunt hook; then continuing the dissection cautiously, an artery was divided, but ligated without much difficulty. Its course was nearly horizontal along the bone, and must have been the *hyoid* branch of the lingual. Here I found myself rather on the inferior border of the bone. The thyro-hyoid space was very small, and the superior thyroid could be felt pulsating distinctly below and behind. On continuing with handle of scalpel above the hyoid bone, and having Dr. T. to draw the enlarged gland as high up as possible, the ninth nerve was seen crossing the hyoglossus muscle, between the two portions of ths digastricus, the gland having overlapped it considerably. Immediately below it, and in the little triangle of which this nerve superiorly forms the base, while the sides are represented by the anterior belly of the digastric in front, and the posterior belly with the stylo-hyoid behind, the hyo-glossus muscle was divided, or rather scraped, through. A vein was found lying on the middle constrictor muscle, running from above and in front obliquely downwards and backwards, a little anterior to which was next observed the lingual artery almost parallel in its course upwards and forwards. Its identity, however, was doubtful for some time. On account of the feeble condition of the patient, it could not be seen to pulsate, and owing to the great depth and narrowness of the wound, on introducing the tip of the finger, it was extremely difficult to locate exactly the pulsations, which seemed all around, but not in it. Finally, after passing my aneurism needle under it, enucleating and lifting it carefully at intervals, and exposing it to different lights, we were enabled to decide that there was a pulsation in it, and that it could not be the superior laryngeal nerve, or, in fact, anything else but the lingual artery. I tied it with a double thread of fine silk. The wound was closed by three horse-hair sutures. A strip of lint was laid over it and secured by a bandage.

The plug in the tongue was then removed without hemorrhage occurring, and patient ordered to be well supported by milk punch in small and frequent doses, administersd through a tube.

February 14th—10 A. M. Rested pretty well and has taken fluid nourishment freely all night, but has been chilly—temperature 104. At 6 P. M., temperature 102–3, pulse 136. Nurse says he had "hot fever," but skin is now good. On the 15th, much better, and wound suppurating—temperature 100, pulse 112.

18th—6 P. M. He was so much better yesterday that I did not see him this A. M.; I now find him in bad condition, temp. 104, pulse, 120; did not rest well; both ligatures have already come away; face swollen and diphtheritic deposit in bottom of lips of incision, involving submaxillary gland which protrudes through the gaping ash colored edges, discharge of pus seems entirely sup-

pressed; had been using chloride soda wash to external wound as well as in mouth; throat is not sore, swallows well soup, milk and brandy; anterior wound in tongue appears clean, healthy and closing; mouth clean. Recipe—Quinine, 1 grain; Tr. Mur. Ferri., ten drops every two hours; Recipe—Permang. Potass Solution, 2½ grains; Aq. 1 ounce, to syringe wound with. The next day the deposit appeared on the posterior fauces, and on the 20th I removed a thick, well organized piece of the membrane with a swab dipped in Squibb's Solution, there being a manifest disposition to bleed. The larynx soon became involved, with shrill croupy cough and whispering voice, the boy refusing to swallow, and death closed the scene on the evening of the 23d, ten days after the ligation, and twenty-one days after the injury. An autopsy was made eighteen hours after death.

With the assistance of Dr. Watson, Demonstrator in the University, I undertook to inject each primitive, carotid with wax and vermillion, in order to trace out the vessels of the tongue, but we made a failure in both for want of a proper syringe. After sawing through the symphisis of the jaw and detaching the mucous membrane on left side behind the frenum linguæ, the ball was found just under the posterior wound made by it on the under surface of the side of the tongue, and we now for the first time discovered an orifice in the mucous membrane of the floor of the mouth leading to its location. It was lying on and above the mylo-hyoid muscle, close to its posterior border and perhaps midway between the mylo-hyoid ridge, and its attachment to the os. hyoides below. It was only a little way above my incision for the ligation, and it seems strange that I did not feel it during the operation, it being so near and much flattened and irregular. If it had not been for the supervention of diphtheria in the boy's feeble and impoverished condition, there is little doubt but that the ligation would have proven successful in saving life.

ART. V.—*Cases of interest occurring at the City Hospital, Charleston, South Carolina.* J. S. BUIST, M. D., Surgeon in Charge.

CASE FIRST—DISEASE OF KNEE JOINT.

Mr. E. S. White, adult male, aged about thirty-six years, a native of South Carolina, was admitted on the 17th day of May, 1872, anxiously asking for relief, with the following history: About ten years since, noticed the appearance of a small pustule, somewhat painful, upon the inner side of right knee joint. This was attributed to a bruise, caused from the rubbing upon the saddle while riding.

It gradually increased, at intervals appearing stationary, losing its acute painful character, and not for months leading to the suspicion of anything serious. Still the rising continued to make slow but sure progress, gradually embracing in its circumference the inner side of the joint.

The war breaking out, Mr. W. was induced to take service in the cavalry arm, and from the nature of his duties excited the parts to a great degree. More or less absence from duty, with rest and quiet, brought relief. At the end of the war, the painful nature of the swelling, with its increasing size, and a failure of relief from usual paliative remedies, induced consultation, with a view of permanent cure. The best surgical aid was obtained, and resection of the joint proposed, the disease, as far back as '66, being recognized as a degeneration of all the structures in and about the joint. This was objected to, and the patient still continued to "hope against hope." Numerous consultations with skilled and experienced surgeons pointed to but one remedy, which was uniformly rejected, until the patient came under my care, ten years after the first appearance of disease.

APPEARANCE OF LIMB WHEN FIRST OBSERVED.

I found an enormous swelling, embracing the whole of the knee joint, and extending upon the thigh about three inches. The whole of the capsule of the joint was involved. The swelling was hard upon its upper and outer surfaces, but soft upon its inner side, with a tendency to point similar to an abcess. The pain was extreme, all motion in the joint was lost, and partial atrophy of the leg had resulted. The whole surface of the thigh was red and irritated from an immense number of punctures incident upon the repeated "hypodermic injection" of morphine, practiced to obtain relief. The limb, in brief, had obtained an enormous bulk, and by its weight with constantly associated pain, was threatening the life of the patient. The constitutional disturbance was marked by deranged digestion, irritative fever, and the usual symptoms characteristic of a long neglected surgical disease.

The system had become inured to large doses of anodynes, but from their long use the nervous irritability resulting was extreme. In short, so marked was the cachexia that the malignancy of the growth was suspected, and operative procedure in consequence deemed to be of doubtful propriety. A critical and close examination upon consultation, determined that the benefit of the doubt should be allowed the patient, and amputation at the middle third of the thigh was determined upon. The patient was treated constitutionally for a few days and then subjected to the knife. On the 28th May, 1872, I practiced the long anterior flap operation. The hemorrhage was moderate and the shock of operation well borne. The flap united by first intention, and in less than three weeks the patient was upon his crutches walking about.

Pathology of disease was found to be fungoid degeneration of synovial membrane and other structures of the joint; here and there osseous matter was blended with the newly formed soft tissues; the whole presented the vascularity incident to rapid growth. The extremeties of the three bones were softened and denuded, and partook of the above named characteristics. The disease was, in other words, infiltrating in its character and embraced all the tissues.

In reporting this case I wish to call attention to one or two points: 1st. The ability of the human frame to bear for such a length of time the ravages of such extensive disease. And second the quickness with which nature responded and brought a renewal of health, strength and vigor as soon as relieved of the burden. The lesson naturally taught is, that with skill and discretion life may be prolonged when death seems imminent.

CASE SECOND—RUPTURE OF STOMACH AND SPLEEN FROM FALL.

The subject of rupture of any of the abdominal viscera is of great interest, and as such cases are of rare occurrence, where they can be distinctly defined, they should always be noted. These reasons induce me to present to the profession the following history of a case coming under my care, together with the results developed by the post mortem examination. Upon looking into the records, it is seen that but few cases of this character are reported, and those only where no doubt could exist as to the cause of death. Generally, some indication of injury was present, as a wound, contusion, evidences of pain, something that could direct attention to the immediate cause of death; but in the present instance nothing of this kind was observed, and the diagnosis, only inferential, had to be substantiated by post mortem developments. In most cases of sudden death, caused, as the history of cases will show, from blows or violent injuries received, when there were no traces of external injury, the cause of death is usually attributed to "shock," the violent effects produced by injury, paralyzing, as it does, the whole nervous energies, from which condition organic function is unable to rally, and vital action ceases, as a necessary consequence. In very many of those cases, if close examination could be made and accurate inspection recorded, evidences, no doubt, could be found of rupture of important vessels, organs, or parts of organs, whose existence, without impairment in the slightest particular, is absolutely necessary to the maintenance of life. It is to direct the attention of the profession to these cases, which are of constant occurrence, and which are reported in the bills of mortality as "effect of injury," "accident," "shock," "concussion," "visitation of God," and which may proceed from rupture of important parts, that I record the following case:

I was called by the coroner, on the morning of the 29th March, 1870, to view the body of Abraham H——, and to perform a post mortem, as the cause of death could not be determined, and a jury had been summoned. The following history was obtained: The deceased had been walking upon the trestle of the railroad and slipped, falling about twenty feet, his fall being broken by a piece of timber about ten feet before reaching the ground, his left shoulder impinging upon the same. He suffered considerable pain at the time, and, from the best accounts, fainted away, but soon rallied sufficiently to be removed, and upon the passing of the up-train was brought to the city. Upon being taken to his home, he was able to sit up and speak connectedly and rationally; complained of nothing more than soreness in the limbs, and a fulness about the stomach. He was placed in bed and the usual means adopted to relieve pain. About 1 A. M. he was found dead in bed, having vomited a small amount of blood, as was seen upon examining the bed clothes. A close inspection of the body could detect no indication of external injury, no bruise, contusion, or any effect of violence.

The abdomen was considerably distended—this, in fact, was the only condition that could possibly direct attention to any region of the body likely to be the seat of injury. Upon opening the abdominal cavity, about two quarts of liquid blood was discovered, but no clots or shreds. The whole surface of the peritoneum was in a state of active congestion, and so was the peritoneal covering of the intestines. Upon drawing these later aside and bringing the stomach into view, the following was found to be its condition: Empty and flat, the opposing mucous surface lying in contact, the cardiac extremity and body pale and flabby, the pyloric end congested and immersed in a large semi-fluid clot. Upon examination of this extremity, a rupture about five inches in length was discovered upon its under surface, extending into the duodenum. A large clot of solid fibrin filled the rupture; no other evidences of injury could be found in this organ.

Upon elevation and examination of the spleen a rupture of about two inches in length and one-half inch in depth was found. All other organs were intact and natural.

For several hours previous to the accident, the patient had fasted, and nothing like indigested food could be found in or about the abdominal cavity. From the large amount of blood in the abdomen, the retention of life for fourteen hours after the receipt of injury, the return to consciousness, and the partial restoration of strength, we may infer that during the so-called fainting the clot had formed, thus arresting hemorrhage for the time, but that finally the clot becoming dislodged, death resulted from internal bleeding.

ART. VI.—*Analysis of the Bones of the Human Face.* By W. D. WAMER, M. D. Laboratory for Analytical Chemistry, No. 20 Broad Street, Charleston, S. C.

The following research was instituted, at the suggestion of Dr. F. L. Parker, Professor of Anatomy in the Medical College of the State of South Carolina:

Since the component parts of human bones vary according to the portion of the skeleton from which they come, as also in relation to their compact or spongy nature, it was thought interesting to determine the ingredients of the bones mentioned below. The material for investigation consisted of the mandible, maxillary, temporal, nasal, sphenoid and frontal bones, taken from the skull of an adult negro, the whole being carefully reduced to powder, with a view to secure an average sample for analysis.

ANALYSIS OF BONES OF HUMAN FACE.

	P. C.
Matter expelled at a low red heat, consisting of moisture and organic matter containing 3.32 p. c. of nitrogen	34.08
Phosphoric Acid.....27.153 p. c	
Sulphuric Acid.....traces.	
Carbonic Acid.....2.30	
Magnesia.....0·432	
Lime.....34.77	
Fluid ingredients, determined.....	64.655
Fluid ingredients, undetermined.....	1.265
Total.....	100.000

Combining these ingredients, according to the method of Hoppe-Seyler,* (Handbuch der Physiol. u. Patholog. Chem. Analyse) it is possible to compare the results above given with previously published analysis of human bones.

*Hoppe-Seyler combines the magnesia with phosphoric acid sufficient to form the tribasic phosphate of magnesia, and doses the remaining phosphoric acid with lime to form the tribasic phosphate of lime. The remainder of the lime, after deducting what is necessary for the conversion of the carbonic acid into carbonate of lime, is reckoned as fluoride of calcium.

ANALYSIS OF THE HUMAN BONES.

ANALYZED BY	WAMER.	v. BIBRA.				HEINTZ.
RACE.	AFRICAN.	EUROPEAN.				
BONE.	FACE.	OCCIPITIS.	CLAVICULA	ATLAS.	FEMUR.	FEMUR.
SEX AND AGE.	Adult.	Man 25 Years.	Woman 25 Years.	Boy 2 Months	Man 25 Years,	Woman.
	P. C.	P. C.	P. C.	P. C.	P. C.	P. C.
Organic matter	34.08	31.27	32.49	35.92	31.03	28.76
Fixed ingredients	65.92	68.73	67.51	64.08	68.97	71.24
Phosphate of Lime	58.16	56.23	56.35	56.35	59.63	60.13
Fluoride of Calcium	1.27					3.52
Carbonate of Lime	5.23	8.00	8.88	6.06	7.33	6.36
Phosphate of Magnesia	0.94	1.40	1.60	1.00	1.32	1.23
Chloride of Sodium &c	0.32	0.90	0.59	1.65	0.69	.....
Fat	34.08	1.35	1.83	1.01	1.33	.....
Organic Matter		29.92	30.66	34.92	29.70	28.76

It will, perhaps, be interesting for me to state that the phosphate of lime in the above analysis of bones of the skull coincides very nearly in amount with that contained in our South Carolina nodular phosphates.

ART. VII.—*Neuro-Physiological and Pathological History of Gun-shot Wounds of the Face.* By MIDDLETON MICHEL, M. D., Professor of Physiology in the Medical College of the State of South Carolina.

As one of the three consulting surgeons of the hospitals in Richmond, Va., I, with the late Professor Charles Bell Gibson and Dr. J. B. Read, had opportunities for investigating some particulars of special interest in connection with gun-shot wounds of the face.

From the immense number of wounded congregated together in the large hospitals in and around Richmond, every variety of injury from shot and shell were brought under observation, and it would be easy to furnish a complete history of this class of injuries did I not intend to confine myself more particularly to the neuro-pathological and physiological features that some of these cases presented.

The general history of these particular gun-shot wounds, on a scale of such magnitude, tempts me, however, to refer briefly to a few points, which, perhaps, are scarcely even touched upon in

works on military surgery; as, for example, the not unfrequent aspect of the orifices of entrance and exit; the absence of tetanus and epilepsy, as a complication of these wounds; the nature of the suppurative stage, where air cannot be excluded; and the low death-rate even where the greatest mutilation has occurred.

I was very soon convinced that the characteristic features of the wounds of entrance and exit, so often verified in other parts of the body, as to form almost an axiom in surgery, were far from being constant in injuries about the face. Where the ball, for example, had entered the canine fossa, and made its exit beneath the mastoid process, the laceration at the point of entrance was so great that the ala nasi torn down and pendulous, the lower eyelid everted, and the septum nasi driven in, made a ghastly and extensive wound; while the orifice of exit was conspicuously small, and apparently only incised. The individual features of these respective wounds were so completely reversed, that an error might easily have been committed, but for the direction of some of the osseous fragments, and the known course of the missile.

These exceptional peculiarities, which I often encountered, seemed to depend upon the situation of the wound, amid such fragile structures, as go to form the fourteen bones of the face.

Another and more important fact was the absence of tetanus in face wounds. While I received reports of deaths from, and cures of, this dangerous complication, (from all departments of the army) in gun-shot wounds in other parts of the body, I have no notes or records of any such accident in connection with face wounds; I have no knowledge of any tetanic symptoms having occurred amidst the vast number of cases coming directly or indirectly under my notice. If I be correct in affirming this disease never to have occurred in face wounds—this fact, not hitherto even referred to by any writer, gives great interest to the subject of tetanus, as it must restrict this phenomenon of excito-motor-reflex action entirely to the afferent and efferent spinal nerves, and to the spinal cord only.

I observed the same negative results with respect to epilepsy. No face wounds were followed by epileptic seizures that I know of, though sometimes implicating the cervical region, through which the ball had made its exit, and exhibiting serious nerve injuries of the laryngeal recurrents. Aphonia, with respiratory embarrassment, and tractions from cicatricial wounds in the neck, interfering perhaps with the play of the platysma muscle, impeded the venous circulation, yet no cases of epilepsy were reported, in any of these kind of wounds. In injuries not limited to the face, but rather to be classed as head wounds, I have the record of epileptic symptoms supervening sometime after, as when a ball had penetrated the temple, fracturing the squamous and zygomatic portion of the temporal bone, leaving a dreadful scar, with depression in that region, though making its exit on the other side through the

cheek; the patient recovering, and some years after informing me of the existence of epilepsy. Here, the compression complained of in the temporal region, explains the influence which the brain exerts in producing the disease; whereas the absence of any event of the kind, when circulation and respiration were obviously embarrassed, bears with peculiar interest upon the theory accounting for epilepsy, which was propounded by so high an authority as Marshall Hall. In injuries of the cranial bones with depression, a very different condition exists. I have operated for the relief of epilepsy under such circumstances, and seen others do the same. We simply mention these two phenomena of *tetanus* and *epilepsy* as related to face wounds, without attempting to connect them solely with a cerebral and spinal origin,—an eristic element in neural pathology of the deepest interest however.

Another point that attracted attention was the profuse suppuration, and putrefactive changes, which gave rise to offensive discharges when no decayed teeth were present. Unlike closed wounds, being in nowise shut out from air, such putrescent alterations of the discharges became an almost constant feature of those injuries, but the ready vent presented in varied directions, accounts for the rare exhibition of toxic influences upon the blood. In some of the worse instances, I witnessed the progress of septicæmia where it was impossible to prevent the swallowing of pus, especially during sleep. It is strange how seldom such an accident occurred, and what little influence pyæmia had in increasing the mortuary record.

The frequency of recovery and singular powers of repair in gunshot wounds of the face are generally recognised. From the proximity of these wounds to the brain, such a result could scarcely have been expected, had not statistics tested the accuracy of the averment. Of 1,265 cases of face wounds, gathered from reports, including superficial, penetrating, and perforating injuries, but 31 deaths occurred. This gives us a ratio of 2.45 deaths per hundred; which is still further reduced, if I exclude cases of erysipelas (4), hemorrhage (6), and pyæmia (2), making in all twelve deaths from incidental complications, (*i. e.*,) not directly the immediate result of the injury itself; then nineteen deaths in the above number will give a ratio of only 1.50 per hundred. Dependent as so low a death-rate may be on the supply of blood, and consequent vitality of the parts, yet I ascribe the event to another and obvious circumstance: fatal injuries about the face and head are left upon the field among the mangled bodies of the dead; those cases that reach field infirmaries are selected cases, since the fearful mutilations from shot and shell rarely come under our care, death taking place immediately from hemorrhage or shock. The occasional evidences which I obtained of death from loss of blood upon the field, have been among injuries in this region, where large and free inosculation of vessels exists, whose course is through foramina and canals,

where they are held incased in an inextensible bony structure, and recoil imperfectly in arresting the flow of blood. When the patient escapes the accidents of shock and hemorrhage, and comes within the domain of hospital experience, an analysis of his wound shows that the injury implicates an osseous framework of fragile texture, intercepted by spacious cavities and sinuses through which a ready drift is afforded to destroyed fabrics and refuse products. In these bony spaces, lined by a vascular sensorial membrane richly endowed with nerves and vessels, provided externally with a continuity of periosteal covering not easily obliterated, and surrounded by no great depth of muscular tissue, it seldom happens that we encounter any vehement reactionary process. Parts become remodelled with singular precision, bone itself is often reproduced,* and elasticity and extensibility of the integument, assist in an easy adaptation of autoplastic methods for obtaining most favorable results. Wounds of this class abandoned almost entirely to nature, leave insignificant traces after a short time, and even when one or more organs of special sense are included in the injury, no really vital part has been attained.

These reasons account for the small mortuary returns, and the remarkable recuperation of form and even function, after extensive and to all appearance, irremediable lesions about the face. I speak advisedly in alluding to a restoration of function, since I have seen general and special sensation, with motion, abolished for some time, yet subsequently restored upon recovery.

Case 1.—General E., whom I saw in consultation with the late Professor Gibson, was shot by a minie ball through both cheeks; in its passage across the buccal cavity, the lower jaw was severely fractured, and the tongue almost wholly divided; the superior maxillary nerve was not injured; general sensation, however, in one-half of the face was suspended, and taste also for sometime; yet the tongue reunited and the gustatory function, in due time, was wholly re-established; sensation returned in the second branch of the fifth, and after consolidation of the fractured jaw, motion was again perfect. The cicatricial contractions, from which we feared permanent adhesions and deformity, gradually disappeared under absorptive changes in the tissues, and affected the parts so little that few indications of so considerable an injury remained.

Our observations multiply instances in which the bones of the face were traversed in varied directions—antero-laterally and posteriorly; the ball making its wound beneath the occiput, behind the ear, or through the temple, in which the known passage of its course, and the parts through which it travelled, made it a matter of wonder how so inconsiderable damage was effected. The bones in many of these cases destroyed to a great extent, were sometimes

*On one occasion, the reproduction of an almost perfect tooth occurred; the report of which case, by Dr. J. S. Blair, may be consulted in the New Orleans Journal, February, 1867, p. 710.

so completely reproduced within a year or two as to restore the general contour of the part. This was noticed particularly in lesions of the lower jaw, where it was impossible to adjust effectually any sort of appliance. The inutility, in a large majority of instances, of bandages or splints, to prevent displacements and deformities, was clearly established. So frequently were striking irregularities among the fragments rectified more or less by the efforts of nature, and so seldom was any permanent inconvenience experienced from want of uniformity in the dental border, even in ununited fractures, that we were impressed with the inutility of forcible efforts in adjusting the fractured bone, and the yet more objectionable attempts with metallic wires, to prevent riding of the fragments—an operation of some magnitude, rarely justifiable in legitimate surgery, since the ingenious interdental splints and clasps of Mütter, Chopart, Malgaigne, Corné, N. R. Smith, and others, fulfil varied indications when intervention is deemed necessary. We have certainly seen mastication performed with ease, when, not only inequality in the alveolar border existed, but when motion in the fibrous or fibro-cartilaginous union among the fragments was so considerable as to produce a permanent false joint. These patients would have subscribed with justifiable reluctance to such interference as has sometimes been proposed. It is questionable in my opinion, whether such operations be necessary, even in the edentulous jaw of the aged, since in them mastication, by no such method, can be facilitated. It seems that where this riding of the fragments obtains in the aged, the lever represented by the lower jaw thus deflected, diminishes the extent of the motion of elevation, at least in part of the parabolic curve of the jaw; and, as this limited motion retains the condyle in the anterior division of the glenoid fossa, renders the supplementary cavity posterior to the glasserian fissure useless, which otherwise would be called into requisition, as a well known provision in the mechanism of motion in the tempero-maxillary-articulation at this time of life.

The renewal of nerve power after gun-shot injuries is a subject of general interest under all circumstances, and of great importance in the prognosis of many face wounds. The pathological history of the phenomenon rests upon the nature of the lesion, the recognition of which involves a somewhat careful review of the intimate anatomy and physiology of the nerves. Impairment in these organs of motory or sensory conduction depends not alone upon anatomical lesion, since there often exists only a physiological destruction of functional activity dependent upon local anæsthesia from shock. Derangements from either of these causes are manifested immediately upon the receipt of injury, but there is a class of accidents of this kind incidental to a change in the relation of parts, which, as they owe their origin to direct pressure and traction upon the nerve, are gradual and progressive. Nowhere is the practice of our science more conspicuously liberated from the

sway of empiricism than in the certitude of a diagnosis, such as we are here able to base upon accurate physiology. Some of these injuries of the cranial nerves constituted, as it were, a vivisectional experiment, which, I think, really contributed to settle some disputed and undetermined points of physiology.

It is unnecessary to detail the many instances which were furnished of destruction of the organs of sight and smell, from direct section of their special nerves by the ball, though escape under some of these injuries was truly miraculous.

Case 2.—At the second battle of Manassas, Private J. C., Company F., 21st Georgia Regiment, was shot directly through the tempero-maxillary fossa. Such was the cerebral concussion induced by the injury that he was left, as was supposed, dead in the ambulance, while the wounded were being removed to the hospitals. Hemorrhage was not great, and reaction finally took place, after thirteen hours, when upon return to automatic life, the relative positions of the orifices of entrance and exit seemed to indicate that the ball must have cut its way through the optic commissure. Later, upon return to consciousness, it was discovered that amaurosis existed in both eyes, with no intra-ocular hemorrhage, and no further change in the visual organs than the consequent dilitation of the pupils. Though some obtuseness of mind was present, ascribed to great debility, no notable disturbance of intellection, and no headache were remarked, and, though sight was destroyed, this patient made a perfect recovery.

In another instance, deserving a minute detail from its physiological bearing, the ball divided the second branch of the *fifth* pair of nerves, accompanied by such local anæsthesia in the parts to which it is distributed, and perturbation of the nutritive functions of growth over which it is known to preside, that no more satisfactory results could have been obtained, from an experimental vivisection, in which inferences are inductive, than were furnished by the intelligent responses of the patient.

Case 3.—Private J. B. N., Company A., 6th South Carolina Regiment, Anderson's Brigade, was wounded about sunset at Gaines' Mills, June 27, 1862. The ball entered the left temple just above the anterior root of the zygoma; in its passage through the tempero and pterygo-maxillary fossæ, we shall see that the temporal and external pterygoid muscles must have been divided; penetrating the spheno-mazillary fissure, the ball tore up the floor of the orbit, destroying the left eye, fracturing the malar bone, and passing through the ethmos and right orbit, destroyed the right eye, making its exit at the outer canthus of the right upper eyelid. No shock was experienced, as he continued to advance, and singular to relate, he was not aware of total blindness, until a comrade called out to him, to take care of the fence immediately before him, when, endeavoring to open his eyes, he discovered his condition. Faintness ensued from considerable loss of blood, and in this con-

dition and exhausted he was brought to Richmond. After a protracted sojourn in private quarters, under the skillful care of his medical attendants, he was also seen by the late Professor Gibson and myself and ultimately recovered. I have seen the patient recently; his health is good. Entropion, and trichiasis, fungous granulations of the conjunctivæ, and an irremediable symblepharon, greatly disfigure him; and these conditions, in both orbital cavities, stlll deprive him of the cosmetic advantages which might be derived from the introduction of artificial eyes. As stated, there was no shock. Remarkably intelligent, the mind has suffered no impairment. Lateral motion in the left tempero-maxillary joint is imperfect, from injury of the pterygoid muscles; nor can the mouth be opened to any great extent from fibrous adhesions in the temporal fossa. With total loss of sight in both eyes, there is also destruction of smell from direct injury of the olfactory nerves, as he is unable to recognise the strongest odors, such as those of tobacco, ammonia and assafœtida. There is, of course, no facial paralysis, as the ball entered nearly two inches in front of the extra-cranial course of this nerve. But we now reach an interesting feature in the history of this case, as we narrate the remarkable consequences of the injury which the left infra-orbital nerve sustained by the destruction of the floor of the orbit. Accordingly, while sensation exists in all parts of the integument of the face, we find it wholly absent in the limited portion of the left cheek, supplied by the distribution of this nerve. When a sharp-pointed instrument is made to range over the region of the canine fossa, side of the nose, and left half of the upper lip, even to its very raphe, no sensation whatsoever is experienced; and on putting a tumbler to the lips, the impression received, is as though he drank from a *broken* vessel. Moreover, so impaired are the nutritive processes in this portion of the integument, that though provided with a heavy growth of beard, which he daily shaves, no beard grows over this region of the face—only half of a mustache could be developed. The capillary circulation in this situation, is everywhere so sluggish, as to have produced a change of color, almost resembling a very pale nævus. The shock sustained by the infra-orbital nerve in its destruction, and compression by the fractured bone, seems to have extended backwards towards the spheno-palatine ganglion, for there is marked difference in the sensation of the mucous surfaces of the soft palate, though its muscles contract perfectly upon depresssion of the base of the tongue with a spatula. There is no *deflection* of the palate, and no permanent impairment of the sense of taste. That transient and permanent anæsthesiæ were produced where no laceration or section of the nerve had taken place, was exhibited frequently. In these cases shock lasted for hours or days.

Case 4.—I was called to see Lieut. M. H. Harman, Company K, 20th So. Ca. Vol., wounded Oct. 19th, 1864, at the battle of Cedar

Run, Virginia. The ball entered the outer margin of the right orbit, destroying this eye, passed through the ethmoid bone, destroying smell, and made its exit just below the left eye, through the cheek. Though it had entirely escaped direct lesion, the *left eye* immediately lost its sight. Complete dilatation of the pupil at once presented itself; the eye was completely amaurotic, and consentaneously with this distress, deafness occurred, though there was no facial paralysis, nor lesion of the auditory nerve. Hearing, however, returned in a few weeks; but the amaurotic trouble persisted for so many months, that we apprehended irrecoverable cecity from so dangerous suspension of the function of the retina. The sight slowly returned; the pupil remained dilated; he could see nothing in detail. Though he perceived the hand, he failed to discern the nails upon it—a confusion of sight dependent upon spherical and distantial aberration—for, during this asthenopic vision, he could see at a distance, and read the letters upon signs in the street. Vision, and the pupil's ready response to light, returned ultimately, when the patient entirely recovered. There is always, however, danger in the prolonged suspension of any function, and when this was noticed as the result of shock among the nerves of the head and face, the most persistive distress was experienced. It is not likely, however, that this remarkable suspension of nerve-power is simply from shock, as we understand the phenomena of shock.

Evanescent effects of concussion in a nerve, are probably always to be referred to simple numbness or anæsthesia, for they are usually but of short duration, and similar to the local effects of ice, chloroform, or ether; but when complete arrest of function takes place in a portion, or whole, or some dependence of a nerve, as in the retina—and lasts for any length of time—we have no doubt local extravasation occurs, which does not always disorganize the nerve, as it may be absorbed, and end in the restoration of its power, as in the case of amaurosis above cited. Death, however, of a nerve, without rupture, laceration, or pressure, most probably always depends upon organic change induced by extravasation, and some formative product of subsequent development, which, if discovered, would be found to constitute a minute anatomical lesion of remote origin. I have repeatedly had reason to lament, during the war, not having access to an ophthalmoscope, with which to determine a positive diagnosis in amaurotic symptoms, supervening upon wounds about the head and face. In the very case above mentioned, one eye was entirely destroyed, and over the collapsed organ, the eyelids were forever closed; but through the dilated pupil of the amaurotic eye, it would have been important to have surveyed the field of the retina, and to have discovered most probably a recent or deliquescent clot, from some rupture of its central artery, pressing upon, suspending, but only threatening, under its gradual and daily disappearance, the function of the remaining eye.

In disturbances of vision, we have the advantage of being able to look into the eye, frequently through a largely dilated pupil, with this valuable ophthalmoscope, with whose assistance it may hereafter be ascertained, that so called concussion of the retina, when no lesion is suspected, is actually the result of laceration of its vessels, with extra-vascular effusions, and equally destructive lesions of its elementary tissues, the result, in other words, of true retinal apoplexy. These disclosures will probably hereafter reduce all cases of persistive paralyses of the retina, to somc organic injury of this percipient membrane, not exceptiong such instances as are sought to be explained by the interdependence of the nerves of the visual organ with the operations of sight through reflex action.

Remote injury of the orbital nerves, accompanied with pressure, perhaps traction, upon the surrounding structures, has also impaired and even destroyed the functions of the retina, when it was difficult to refer the condition of the eye to reflex paralysis. Indeed, as we have remarked in gun-shot wounds, considering the extent of the injury, vehemence of the force, and concussion which ensues, it appears to me more probable that the loss of sight is often the result of retinal extravasations, or textural changes in that membrane.

Case 5.—Private A. C. T., New Orleans Zouaves, was cut deeply over the left superciliary ridge and eyelid, by a piece of shell at the battle of Seven Pines. The wound healed by granulation, and when I examined him, a year after the accident, there was falling of the eyelid, dilatation of the pupil, and amaurosis. There had been no fracture of the frontal bone, no inflammation of the eye, no intra-ocular hemorrhage, no inflammatory congestion of the side of the head or circumorbital region, there was no traumatic cataract, and the motions of the eye were perfect. The integument of the forehead was not so strikingly insensitive as that of the fallen eyelid, but a deep cicatrix extended an inch above the eyebrow. There was some disposition at once, among the different surgeons to ascribe the amaurosis and mydriasis to reflex paralysis through injury of the first branch of the fifth, and shock of ciliary ganglion. The division of the frontal nerve, and the elevator muscle of the lid, the cicatricial adhesions and probable traction upon the branches of the ophthalmic nerve of Willis, were not calculated to dismiss this conjecture; but so great a shock to this branch of the fifth would have impaired, it seemed to me, the nutrition of the eye; and its vessels, affected perhaps through the sympathetic root of the ciliary ganglion, might have exhibited a state of passive congestion; yet there was no vascular stasis within or around the eye, no disturbance in the circulation of the circumorbital region; there was no cataract indicating imperfect nutrition; and the mydriasis was certainly not due to want of balance between the radiating and circular fibres of the iris, as no paralysis of the third pair of nerves existed, for the motions of the eyeball were perfect, and the

eye was not abducted. It appeared to me, therefore, upon more careful consideration, that the dilatation of the pupil in this case again, depended, from the commencement, upon want of neural force sufficient in the retina to evoke excito-motory action through the third pair of nerves; retinal lesion or subsequent disease in the membrane was the primary trouble, dependent upon the violence of the blow, rather than upon the section of the frontal branch of the fifth. It is to be regretted no ophthalmoscope was at hand, with which to determine the condition of this part of the eye.

That lesions of nerves, still more remote, may affect the functions of the retina, is sometimes observed in injuries of the cervical portion of the cord and its nerve trunks. In these reflex operations, which take place through the cilio-spinal track of the cord, or through the tri-splanchnic ganglion of the cervical region, the pupil is contracted almost to a pin-hole, as the radiating fibres of the iris are paralyzed, and the circular fibres contract without antagonistic restraint. However frequent this condition of the iris in injuries of the brain, I do not remember that it ever was noticed in our hospitals in injuries about the nerves of the cervical region, or brachial plexus. I have no examples of this kind of paralysis to relate, from among the large number of gun-shot accidents with which I was personally acquainted, and therefore infer that such cases are as rare as they are instructive.

Since the collection of the data, which it was my good fortune to make, from personal research, and communicated reports, I find that cotemporaneously with myself, Dr. Mitchell, with Drs. Morehouse and Keen, was instituting most interesting inquiries at Turner's Lane Hospital in Philadelphia, established in May, 1863. These gentlemen report the only case with which I am acquainted of the above mentioned nature, and which is so exceedingly rare and unknown, that I am sure the reader will pardon my introducing it at length:

Case 6.—E. Mooney, Private, Company E, 110th Penn. Vols., was wounded at Chancellorsville, May 3d, 1863. The ball entered the right side of neck behind ramus of jaw, and emerged below angle of jaw of the opposite side. He remained insensible for a half hour, and then walked three miles to the rear. There was some hemorrhage, and deglutition became utterly impossible for five days from excessive pain, referred to a point behind the pomum adami, and his voice became very hoarse. These symptoms soon disappeared, but a month after the injury, a peculiar appearance of the right eye was observed, with marked photophobia. The pupil of right eye was contracted, that of the left dilated. Slight, but distinct ptosis of right eye diminished the apparent size of the organ. There was some play of the pupil before bright light, and the right eye became myopic. The conjunctiva of the right eye was slightly redder than that of the left; but, when taking exercise, the right

side of his face became distinctly flushed, while the left remained pale. This latter fact was especially noticed, and by October, all of these peculiar symptoms disappeared, when he was returned to duty.*

We have encountered no special injuries of the third or fourth pair of nerves, for the introduction into military service of the Minie ball renders it improbable that a missile of its size should either lodge within the orbit, or produce, *in transitu*, partial section of certain orbital nerves, without necessarily involving the entire eye. Partial lesions of the muscles in the orbit, with cicatricial tractions upon the globe of the eye, must not be overlooked in this minute recital of the different kinds of injuries we have witnessed, nor should they be mistaken for the result of paralysis of any particular nerve or branch of a nerve. It has happened that a Minie ball has produced the section of only one muscle, and subsequent adhesions have given to the eye a marked deflection upon one of its axes, which might well impose the belief of paralysis in some antagonistic muscular organ. Such an example is furnished by the following case, which was under the charge of Surg. L. C. Pynchon, of the Pim Hospital, Albany, Ga.:

Case 7.—Jno. W. Poff, Private, Company K, 2d Kentucky Regiment, was wounded May 27th, 1864. The ball entering near inner canthus of left eye, passed backwards, emerging at left mastoid process. There was slight paralysis of left side of face, and marked internal strabismus of left eye. There was, however, no lesion, no paralysis of the sixth pair of nerves, nor of the common motor nerve or third pair, since all the recti-muscles functioned well, except the internal. The obliquity of the eye was wholly mechanical, dependent upon the condition of the wound and cicatrix, which established a permanent contraction at the inner canthus.

We have no cases to relate of the lodgment of a ball of such dimensions as the Minie within the eye itself, as was formerly seen when shot and small pistol balls were in general use.

The total destruction of the eye, elimination of its contents, and collapse we have seen, when there was injury of some extent in the temporal region, and when neither the eye, nor any of its accessory structures or nerves were directly implicated. Such instances are explained by the disorganization of the organ from concussion—the primary changes of which were early exhibited in the internal hemorrhage of the eyeball, distending and destroying the dioptrical apparatus, producing slough of the cornea and evacuation of the humors. These cases were, without exception, accompanied with dangerous and prolonged shock, and on several occasions with subsequent cerebral symptoms, such as epilepsy. Of several examples of this kind of destruction of the eye, we shall cite but one, with those details only that relate to the injury done the eye:

*Gunshot Wounds and other Injuries of Nerves. 1864. By S. W. Mitchell, G. R. Morehouse and W. W. Keen, Philadelphia.

Case 8.—Colonel A. C. H., of the 7th Regiment of South Carolina Cavalry, on the 7th of October, 1864, in personal encounter with General K., and body guard, on the north bank of the James River, at a distance of about the length of a horse, received a wound inflicted by a carbine or horse-pistol. He fell from his horse, and was insensible for over forty-eight hours. The rifle-ball entered the left temporal region, and tore away the deep-seated structures, fracturing the cranial bones (temporal and parietal) backwards and upwards. When he reached Richmond, and I examined the wound, in consultation with Professor Gibson, the membranes of the brain were exposed, and small fragments of the squamous portion of the temporal bone were removed. This loss of substance has been filled by cartilaginous growth, which has sunk and compresses the cerebral mass. The eye, which I carefully examined, was distended by intra-ocular hemorrhage. Without referring in this place to the cerebral symptoms, which are very instructive, suffice it to say that gradual changes occurred in the cornea, by which the eye was entirely evacuated and collapsed. Enough of the globe remained after the collapse of the organ to admit the introduction of an artificial eye which he wears conveniently, while it possesses all the motions of the globe.

These direct, indirect, and remote lesions, from gun-shot wounds have been selected, to show in what way the organ of vision, and accessory nerves most frequently suffered.

(*To be continued.*)

ART. VIII.—*Subinvolution of the Uterus.* By S. BARUCH, M. D., Camden, S. C.

Medical literature of the past few years teems with contributions to that department of our science, to which I propose to direct the attention of the reader. The rich stores accumulated in the branch of Gynecology, by the brilliant investigations of the most eminent pathologists and clinicians of the age, are spread before the inquiring student in the various publications of the day, and offer to him the most attractive reading in the whole field of medicine.

Yet it has been my experience, in my intercourse with physicians, to whom these subjects were somewhat new, that the text books and recent monographs on the various subdivisions of Uterine Pathology, are not calculated to impart to the inexperienced physicians, such clear ideas of diagnosis and treatment, as would simplify the latter and guide him to success. On the contrary, the various divisions and subdivisions of Metritis, and the variety of ulcers enumerated, described and figured in most of these works, bewilder the physician, who sees comparatively few of these cases and serve only to perplex him. I do not propose to inaugurate a new era in

the study of these affections, nor to point out a royal road to their complete mastery. I am to direct the attention of that large body of busy practitioners, who, removed from the resources of hospital and dispensary practice, are deprived of the practical teachings of the bedside and examining table, to one condition of the uterus, whose exceeding frequency, has strongly impressed me with the belief that it is the most constant origin of the majority of uterine diseases among married females. This observation being the result of a somewhat extensive experience in this department during the past ten years, I may assert that a thorough understanding of this condition which has been termed "Subinvolution" of the Uterus, will furnish the key to the management of the majority of cases of uterine disease, that will present themselves to the village and country physician.

I may remark however, *en passant*, that during six months attendance as assistant visiting physician to the Demilt and Northwestern Dispensaries of New York, I observed the same frequency of subinvolution, as a cause of numerous uterine maladies.

The master hand of the lamented Simpson first clearly described and christened this affection of the uterus, and to his lucid lecture, published in the *Medical Times and Gazette*, I was, in my earlier years of practice, indebted for the first lessons, which have aided me in the study of a pathological condition, whose frequent successful management has been highly gratifying to me.

An organ whose whole vascular, nervous and parenchymatous structure has, during a period of nine months, passed through a complete revolution; whose position, relative and intrinsic, has become completely altered; whose customary functions, being entirely in abeyance, have been substituted by others of a totally different nature, which, at last, culminate in the sudden and violent convulsion incident to labor, becomes the seat of changes which are destined to restore it to its pristine condition. We stand in awe when we contemplate the wonderful resources of nature which, in the brief space of a few weeks, accomplish this gigantic result. When it is remembered that such a rapid and important transformation demands complete integrity of all the organs involved, it will not be surprising to the physician that it is frequently arrested or impeded by various causes, which may have pre-existed, or may have been induced during the period of labor or pregnancy. Let us, for a moment, cursorily examine the normal process of involution, and we will then be better prepared to study the pathological aspect.

According to Busch, the uterus begins to lessen in size during the last month of pregnancy, closing upon the contents more firmly. During labor, this active tendency to resume its previous condition reaches its highest intensity, and continues afterwards only a short time in a lesser degree. This tendency expresses itself dynamically by repeated contractions of the muscular fibres, which some observers claim to continue, though painless, during the whole process of

involution. The latter, however, is aided by that process of fatty degeneration which is not due to the removal of the components of tissue and their displacement by fatty matter, but is the result of *real conversion* of muscular fibre into fatty tissue, as has been demonstrated by Virchou, Kilian and Retzius. This fatty transformation commences, according to Dr. Heschl, between the fourth and eighth day after accouchment. With the advance of fatty degeneration, the uterus becomes friable, and the tissue surrounding the fibres becomes absorbed; the structure loses its reddish appearance, and assumes a dirty yellow color. About the fourth week the uterus assumes its normal volume, and a new uterine tissue may now be observed. In the body of the organ and in its outer layer, nuclei, cells, and finally cells drawn into fibres, make their appearance, and ultimately become the new uterine substance. As these increase, the old tissue is absorbed and the process is completed at the end of the second month. The veins and capillaries undergo a similar transformation.

The lining membrane of the cavity, when examined a day or two after delivery, appears loose and corrugated, somewhat softened and covered more or less by patches of the decidua. The structure of the uterus, if cut into, is found to be less dense than natural, and its fibres more distinct; the sinuses are still very evident, and, at the placental insertion, filled with clots of blood. The "os" remains open for several days but gradually closes. (Churchill.)

Pathology.—In recent cases of subinvolution, the anatomical evidences of normal involution are still present. The uterus is found increased in volume; it is rounder than in the natural condition; its structure friable, texture loose and flabby. An incision presents to the eye a yellowish, chamois-like appearance, tinged red by intersecting muscular fibres. After the lapse of a longer period, the organ assumes a more indurated condition. It feels tough, inelastic, no longer soft and doughy, and it is somewhat smaller in size than the uterus immediately after delivery. Its tissue is anæmic, hard, dry, and grates under the knife when cut, the incised surface presenting a yellowish white, silky, shining appearance. (Seyfert.)

The uterine cavity is always enlarged, its lining membrane tumefied and not unfrequently studded by fungoid growths, which give rise to intractable hemorrhage. The glands, especially those of the cervix, are considerably developed and distended by accumulated secretions. The textural changes at a later period correspond with that hypertrophy of the uterus produced, according to Klob, by proliferation of connective tissue, a condition formerly mistermed chronic metritis.

Symptoms.—The existence of subinvolution is manifested by local and general signs. Bimanual palpation discovers the uterus somewhat depressed in the pelvis—frequently retroverted. Its volume varies from that of a man's fist to double that size. Its outline may be distinctly felt by the right hand pressed down into the hypro-

gastric region, while two fingers of the left, in the vagina, touch the cervix. It feels soft and flabby, but *is not*, in recent cases, painful on pressure. Pain is, however, not infrequent, when, dragging upon the ligamentous connections, the uterus has long occupied an abnormal position.

The rectal touch, which is indispensable, determines *in these cases* great tenderness in the posterior wall, which is at times so hardened and nodulated, that it has been mistaken for a fibroid tumor. The cervix is large, round, flabby and soft in recent cases, but in confirmed conditions it becomes inodular. The introduction of the sound is always easy; it enters the patulous os from two and a half to six inches. In one case I have accurately obtained the latter measurement. Not rarely, the withdrawal of the sound, even after careful introduction, is followed by more or less hemorrhage. The inner uterine surface is not usually sensitive to the impingment of the sound, the instrument rarely causing pain unless retroversion exists. On introducing the ordinary glass speculum, the os is seen large, patulous, having the appearance of a longitudinal split, surrounded frequently by erosions, which extend into the canal; a stringy, tenaceous, yellowish white mucus hangs from it, and is with difficulty removed by the swab.

If the "*Boston Speculum*," which is a modification by Professor Storer, of Cusco's, is used, and its blades are freely separated, the flabby, stilt-like os will yield to the traction power of the diverging blades, and present a more rounded appearance. I would say, *en passant*, that this is by far the most useful speculum for the ordinary purposes of uterine practice, as it can be converted at pleasure into a retractor, thus substituting Sim's instrument. A deeper view of the cervical canal being obtained by this instrument, the erosion can be traced beyond the ordinary field of vision. Occasionally the eroded surface is covered by luxuriant granulations, which give the angry appearance of an ectropion of the cevical mucous membrane. This condition of the os is characteristic of subinvolution in its earlier stages. When the case is more advanced, and is complicated with the versions, and flexions, which are the inevitable sequences of any long existing abnormal condition of the uterine vessels and parenchyma, the diagnosis becomes more obscure, especially as the pathological condition now simulates very closely that of chronic metritis, or more properly speaking, the areolar *hyperplasia* of later writers. The history of the case, however, will always associate a confinement or abortion with the starting point of the disease.

The rational symptoms of this affection are lumbar pain, of a dragging character; a heaviness or bearing down sensation in the hypogastrium, sometimes accompanied by painful or difficult micturition. The patient most usually presents an anæmic aspect, and suffers from all those nervous and vascular disturbances incident to that condition. The bowels are torpid, the evacuations being often

coated with mucus and passed with much difficulty. Patients frequently complain of an exceedingly annoying uneasiness, amounting at times to pain, in the course of the sciatic nerve. I have observed this condition more generally in the right leg, and have found it one of the most troublesome symptoms to combat. Menorrhagia is observed in a large majority of cases of subinvolution, and is usually the difficulty which first prompts these patients to seek medical advice. In recent cases we are told that the lochial flow had scarcely subsided when "the courses" reappeared. These are said to have continued almost without interruption from day to day, leaving the patient scarcely any interval of rest, during which the white or creamy discharge would substitute it. This continuous drain produces anæmia with its attendant evils, enhancing the very difficulty to which it owes its origin. In those cases in which fungoid excrescences form, the hemorrhage is more unmanageable even than that incident to polypi or fibroid growths. In fact, these continuous hemorrhagic effusions, be they slight or profuse, constitute the most formidable symptom of the disease, and I consider them pathognomonic of subinvolution, if the sound and touch do not discover any tumors in the uterine cavity.

If the patient be carefully interrogated, with reference to all her labors and abortions, it will not be difficult to fix the period of inception of the disease.

Leucorrhœa is not a constant symptom, and is only met in those cases where the cervix is eroded, or ulcerations, around the os, produce purulent discharges. A white, glairy discharge is symptomatic of later stages, while purulent or sanious discharges indicate the earlier.

Etiology.—The causes of this affection, which undermines the health of so many women, are many and various.

The previous habits and mode of life of a woman bear a remarkable and well-known relation to the progress of her labors and her convalescence from them. Among savage nations, parturition is performed without difficulty, and the women at once return to their duties. But the refinements of civilization and the cares, excitements and enervating tendencies of modern life have deprived woman of that constitutional vigor and healthy tone of the muscular and nervous systems so necessary to a normal performance of her maternal duties. Among the better classes of society I have often been painfully struck by the fact that a large number of recently married women enter a state of valetudinarianism very early after their first accouchements. Participating in the gaieties and frivolities of fashionable life, with its attendant late hours, indiscretion of diet, imprudence in dressing, irregularity of habits, extreme exaltation of the sensibilities, disregard of menstruation and other functions, a young woman marries. She enters upon a state of pregnancy, but continues to defy the laws of her organism and still disobeys the "still small voice" created by the backaches and head-

aches, that follow her indiscretions. An abortion is not unfrequently the result; but if the conservative powers of her constitution enabled the uterus to carry the ovum to its full function, a tedious labor is followed by a more tedious convalescence. A second pregnancy and accouchement find the uterus in a more degenerate condition, the processes of involution are interrupted, and uterine disease is established.

Among the middle classes and working people the same enervating elements are not at work. Here, negligence, ignorance and the stern necessities of life undermine the constitution. The presence of the menstrual flow is disregarded; they expose themselves to vicissitudes of weather; while the flow is in active progress, they wade streams, wash at the springs, carry loads, or labor in the fields still covered by the dew, thus partially or entirely suppressing the menstrual discharge. Stasis and consequent hyperaemia are the results, from which the ligamentous connections and peri-uterine tissues also suffer, even if no inflammatory condition supervenes. During pregnancy, this class of people are usually more active, women often attending to their fatiguing household duties and performing the heavy labors of farming, until the very inception of their *second* stage of labor. They pass through labor with greater rapidity, and soon begin to long for the day of delivery from bed. Many of those people employ midwives, whose ignorance is only surpassed by their conceit. The *puerpera* is permitted to rise on the second or third day, and not rarely she attends to her duties before the expiration of a week. The result is not surprising. The enlarged uterus is insufficiently sustained by its ligamentous connections, and scarcely at all supported by that arched column, formed by the vagina, which has its base at the perineum, and which in its entire integrity is so beautifully adapted to maintain the uterus in its normal position. Immediately after labor the vaginal tissues are paralized by the immense stretching they have sustained, and they are therefore incompetent to act as a support to the heavy uterus. Hence, too early rising after labor is the most frequent etiological element of subinvolution among this class of patients. But there is another evil supplementing the latter, viz: the improper diet to which these people are subjected. Their ignorant attendants feed them during the first week on what is, par excellence, a light diet, viz: tea, toast and gruel; all stimulating and sustaining articles of diet are sedulously avoided, lest their "heating properties" produce inflammation. The patient's stamina is impaired, the circulation suffers, and the due execution of the local processes of degeneration and absorption are interrupted. Degeneration into fatty material continues to some extent, but absorption of this material is in abeyance, owing to the want of proper tone in the local and general vascular system. The same vicious mode of dieting puerperal women obtains frequently among the better classes, lowering their vitality and impeding involution.

In the lower strata of society we find subinvolution arising from the same causes as among the middle classes. Here, however, there are other elements at work that require notice. The low state of morality, engendered by their depraved habits and dissolute associations, renders them peculiarly prone to pregnancy. Their disregard of all moral obligations, however, often prompts them to seek to rid themselves of the cares of maternity. They resort to various indigenous oxytoxic plants, that abound in our fields, the most favored of which is the familiar Gossypium, which is used with great efficacy. It is an astonishing fact that has frequently forced itself upon my notice, that abortions are more frequent among the colored people and the low class of whites than among other classes of society. It is very rare that one of these people, especially when unmarried, carries a child to full term. Repetitions of these abortions and the subsequent neglect of all hygienic rules, which are purposely disregarded in order to escape detection, soon engender that lax and hyperæmic condition of the uterine and peri-uterine tissues, which impedes the return of the uterus to its pristine condition.

Criminal abortion, however, is almost solely confined to the lower classes in this region of country. Judging from the startling reports we receive from other points, it has become so general among the upper classes as to threaten terrible inroads upon the population. Fortunately we are still so remote, geographically, from the centres of "civilization" as to be shielded against the wiles of this hydra-headed monster, that throttles a human being at the very dawn of existence.

An abortion is viewed as such a trifling matter by most women, that the ordinary precautions observed after labor at full term are neglected and involution is impeded. I have observed, however, that the premature expulsion of the ovum, during the earlier months of pregnancy, is a fruitful source of uterine and peri-uterine inflammation, whilst abortion in the latter months is more productive of subinvolution.

(*To be continued.*)

ART. IX.—*Cerebro-Spinal Meningitis, treated with Carbolic Acid.* Letter to the Editors from Dr. C. H. LADD, Winnsboro', S. C.

GENTLEMEN: As Cerebro-Spinal Meningitis is, and has been, prevailing to some extent throughout the State, especially in the northwestern portion, a few observations may be practically useful by adding to our clinical experience; and, whilst I have little to say, the experience of the few cases given may enable others, with better opportunities, to test the merits of the treatment recommended, and thus prove of some good.

The first recognized case of cerebro-spinal meningitis occurred in Winnsboro', under the care of Dr. T. B. Madden, Dec. 28th, 1872, in the person of a young man aged 17, white, who, the day previous, had been, contrary to his usual habit, as reported, indulging over freely in Scotch whiskey and lager beer.

Without entering into the details of cases, the object of this article being simply to call attention to a special mode of treatment, it will suffice to say that the symptoms have been such as are usually described as appertaining to this disease, and that for the first three days (I was called in consultation the second day after the first appearance of the symptoms) we were much puzzled to know whether we were to have a case of acute rheumatism, typhoid pneumonia, or mania-potu, the symptoms being exceedingly doubtful.

On the third day, however, opisthotonos, with the other symptoms, clearly revealed what we had to deal with. Two doses of calomel were given before I saw the case; with this exception, the treatment was with quinine, spirits turpentine, morphine, chloral, cathartics, and a blister applied to the back of the neck—all of which seemed to be of no benefit, death resulting on the night of the seventh day.

Dr. Madden informs me he had two cases, both colored, one male and one female, ages about 18, attacked near the same date of above case, treated similarly; one, the male, died on the eighth day, and the other made a slow recovery.

During the first week in January, and since, several cases have occurred in and near this place. A majority of these have proved fatal. The treatment, so far as I have heard, has been substantially that above given. The only cases, since the first just reported, that I have personally attended, were colored persons, one an adult female, and two children, 7 and 10 years of age, both females, and members of the same family. In each of these cases the symptoms of cerebro-spinal meningitis were unequivocal: chill and continued coolness of surface, pulse natural, or rather slow and full, temperature but slightly elevated at any time, marked headache, with pain in the neck and extremities, general hyperæsthesia, densely furred, dry, brownish tongue, anorexia, vomiting, constipation, sleeplessness, and, in two of the cases, delirium and opisthotonos.

In two of these cases, and after the fourth day in each, with the exception of an occasional saline cathartic to relieve constipation, the only treatment pursued was a blister two and a half by twelve inches, applied down the neck and spine, and the exhibition of carbolic acid, in sweetened water, every second or third hour.

In one of the cases, my second, I commenced with the usual treatment, opiates, quinine, turpentine, etc., and as each day developed the fact that the symptoms were rapidly increasing in severity, I determined upon the carbolic acid treatment. The rapid amelioration of the symptoms following its use was both gratifying and surprising. Since then I have not used any other remedies except-

ing the saline aperients and blisters, and each of the three cases treated have made speedy, uninterrupted recoveries.

Whilst it is impracticable in so short a time, and with so few cases, to make any analysis of the quantitative value of any single remedy, or even to decide with satisfaction whether the results obtained are attributable to the qualitative value of the remedies or the mildness of the morbific influence, it would be hazardous to draw any inferences; it is, however, proper to report results as adding to our statistical information, especially in diseases like the one under consideration, in which all remedies have heretofore seemed almost nugatory.

The pertinent facts of these six cases may be thus briefly summarized:

1st. Of four cases of cebro-spinal meningitis, two above mentioned and two reported by Dr. Madden in which the usual remedies were tried, two died within eight days, one made a slow recovery, and one was rapidly growing worse when carbolic acid was substituted for other treatment.

2d. Of three cases treated with carbolic acid, two from the commencement and one after the usual remedies had proved unavailing, the recoveries were rapid and uninterrupted in each.

The obvious conclusion is, first, that the usual remedies, as the experience of physicians teaches, seem to have little or no influence in arresting the disease; second, that three of the six cases above mentioned were of a much milder nature than the others; or third, that carbolic acid, blisters and saline cathartics do, in combination, if not singly, exercise a measurably controlling influence.

I am disposed to attach much importance to the carbolic acid—to attribute to it a larger influence than to the blisters or cathartics—because, first, in each of the cases in which it was used, blisters were not applied until the third or fourth day, until, in fact, the acuteness of the attack had terminated; and second, in one, (the first case treated with carbolic acid,) the disease was on the increase, although vesication from a blister had existed for two days, amelioration of the symptoms following only, and almost immediately, upon the use of the carbolic acid.

Blisters and cathartics (I have given the preference so far to sulph. magnesia) have appeared to me to have about equal value in relieving headache and inducing quietude of the nervous symptoms, and will therefore, should other cases fall under my care, try simply the carbolic acid in ¼ to 1 grain doses, and sulph. magnesia in mildly cathartic doses to relieve constipation.

A word as to diet in the disease, and a suggestion as to its pathology: I ordered as much liquid, nutritious food as the enfeebled condition of the digestive apparatus would permit.

From post-mortem examination and general character of the disease, it would seem that its essence is a too rapid blood-cell proliferation—a denutrition conjoined with sub-oxidation, or proliferation

of connective-tissue corpuscles, as taught by Virchow. The latter is, however, more likely a consequence of capillary embolism, induced by the former, and doubtless has its prototypes in the inflamed Peyer's glands from localization of the septic element in typhoid fever; the meningial inflammation following the healing of gun-shot wounds, as first pointed out, I think, by Velpeau, and the pharyngeal and tonsillar deposits in diphtheria, the anatomical lesions in each being, doubtless, but the localized manifestation of the morbific influence.

It is a little singular, but not exceptional in therapeutics, if carbolic acid should prove of essential service in the treatment of this fatal disease, that its primary toxical action is a development of hyperæmia of the brain and its meninges, and an ex-sanguine condition of the spinal cord and vessels below the cervical portion.

C. H. LADD, M. D.

Winnsboro', S. C., Feb. 8th, 1873.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

ART. X.—*The Principles and Practice of Surgery.* By FRANK HASTINGS HAMILTON, A. M., M. D., L. L. D., Professor of the Practice of Surgery, with Operations, and of Clinical Surgery, in Bellevue Hospital Medical College; Visiting Surgeon to Bellevue Hospital, etc. Illustrated, with 467 engravings on wood. Royal 8vo: pp. 943. New York: Wm. Wood & Co. 1872.

We rejoice that this is a "free country," but think it unfortunate that every man has the privilege of writing a book. There are books that are useless, books that do irreparable mischief, and books that do infinite good. One man writes for money, another for reputation, and a third for the advancement of truth or science. Often the writing indicates the mixed motives of selfishness, vanity, and love of well doing. As human nature is proverbially weak, we at times read and willingly pass over the frailties that authors exhibit.

Medical authorship is perhaps more than any other likely to develope either blessings or curses. Its claims are generally based upon experience, and, as *experientia docet*, we eagerly look and hope for knowledge. How gladly we hail the outspoken doctrines and decided precepts of one who has garnered from a wide field, and been long honored for labors and duties performed. We confess to the highest pleasure when we see the American medical mind asserting its independence and striking boldly for progress.

Professor Hamilton has long been favorably known to the profession, and his work upon "Fractures" is considered standard everywhere. At the time this was written, there was much need for a special treatise upon so important a subject. The work of Sir Astley Cooper, excellent in its day, was no longer sufficient for the requirements of the age, and there was no other work in English suited for the student and the practitioner. Professor Hamilton worked faithfully and well to supply the necessity. The profession welcomed his book, and accorded to him a hearty *well done* for a true contribution to science.

Time has since rolled on. Professor Hamilton now occupies the Chair of Practice of Surgery, with Operations, etc., in one of the best schools in America. To his ambition to enter a wider field of authorship we cannot object; yet we had every reason to hope and expect that in his bolder effort he would occupy ground not already taken up—that, more than ever, he would strive to illustrate the vigor, the genius and the value of American surgery. We regret to say he has disappointed us.

American surgery has long been nobly represented by the world-known book of the venerable Professor Gross, of Philadelphia. This has but just passed to a new edition, and is brought well up to the time. Is the book of the new aspirant calculated to take the place of the old authority? It purports to be a *general* treatise on surgery, and in its compass to take in the same wide field so well cultured by the Philadelphia surgeon. The preface announces the purpose of the author "*to supply within the compass of a single volume of moderate size the instruction necessary to a full understanding of all the subjects belonging properly and exclusively to surgery, the volume being intended as a text-book to students, and at the same time as a direct and complete guide to the surgeon.*"

After a calm survey of the field of labor, we ask ourselves if "one blade of grass has been made to grow where none grew before?" How many of the plain promises of the author do we find performed? Unless we are sadly ignorant of "the instruction necessary to the full understanding of all the subjects belonging to surgery," we must confess that the main fulfillment of the promise is the issue of the "*single volume of moderate size.*" In this we have the old attempt to produce a "*multum in parvo*," and the error of encouraging the belief in a "royal road to knowledge." The "moderate-sized volume" (one might as well say the cheap one) is intended as a "*text-book for students.*" The innocent are the most likely to accept, and the most certain to suffer. Poor students! we pity your poverty, which must so often determine the selection of the source from which you hope to derive what will best fit you for the struggle with disease and death!

Had it been claimed that this volume was a guide to the Professor's lectures, and that it represented only his Chair in the Bellevue College, criticism might have been in a manner disarmed. But the

aim of the work is higher, for it strives to attract the student of general surgery. It falls far short of its proposed objects, and must prove inadequate to those who would rely upon it. In our judgment, then, the book is worse than a failure.

Here is illustrated one of the evils that comes of the multiplication of medical schools. We desire to impugn the motives of no one; but we regret to see the growing disposition on the part of professors to write *text-books*. Some of these may be valuable, but the majority can be truly classed with *books written for money*, and, *par consequence*, as books that do harm. We war against this practice, and we especially denounce the books that promise, and consequently fail, to do impossibilities. However, let it not be understood as our opinion that the book in question possesses no intrinsic merit. While we could well afford to do without it, we will say that the practical rules are in general good, and the condensation well done. Some details we will notice presently; but first we would have it understood that we object to the character and the results of the author's labor in sorrow, rather than with the captiousness of criticism.

We predict that the present effort will rather drag down than further elevate a good name in the profession. The standard of excellence in modern surgery should have been fixed higher. The student, for whom the work was intended, should have been induced by every effort to recognize the importance of Physiology and Pathology to general Surgery. Surgical science should not have been ignored in teaching surgical art. Contrast, for a moment, Professor Hamilton's meagre account of "*Principles*" with the excellent condensation of Surgical Pathology, by Professor Billroth, and we have a most clear appreciation of the relative value to be put upon the labors of the two men. How elevated and progressive the teachings of the one; how feeble, how infinitesimally small the efforts of the other. Alas! that teachers of our science should be so widely separable. If the students of Bellevue Hospital Medical College accept the text-book of their teacher, we hope they will not fail to give a share of attention to the treatise of the Vienna surgeon. Thus may they be prepared, when called upon to decide upon so important a question as that of blood-letting in the treatment of inflammation, to act under some more definite rule than the following given by the Bellevue Professor: "*If in any case the surgeon is persuaded that this morbid action is maintained by an excess of vital fluids or of vital functions, let him bleed his patient.*"

If we question the fact of Professor Hamilton's having added materially to surgical doctrine or practice by the present publication, it must not be inferred that he expresses no original or decided views. Such he often puts forth in a manner calculated to carry conviction to the student and young observer, and certainly

to prove that he serves no master. We may admire his independence of thought without subscribing to his doctrines.

Tenacity of opinion is well illustrated on page 43, when discussing the repair of ulceration. Since 1848 it seems Professor H. has entertained doubts as to the doctrine that skin never forms *de novo*. At that time he was convinced that he had seen skin form from the periosteum or the bone. "In two or three cases since, similar facts have come under my (his) notice." And at the present time he remarks "in view of what is now known," that he does "not feel quite so certain that these were examples of the formation of the skin from bone or periosteum; possibly an epithelium cell was accidentally deposited at these points."

Pertinent to this subject we may accord priority in the matter of healing of ulcers by transplantation to Professor Hamilton. This proposition he advanced as early as 1847. His method was that of "*Anaplasty.*" A "*pediculated graft*" was made to occupy the centre of the ulcerated surface, and from thence to extend itself after its attachment. It was not until 1869 that M. Reverdin, of Paris, reported his plan of "*epidermic grafting.*" Though this latter process is essentially different from the "*Analpasty*" of Professor H., the principle was evidently foreshadowed by the practice of the American surgeon.

The new skin formed by grafting, Professor H. thinks thicker and more elastic than ordinary cicatrical tissue. In the case of contractions from burns M. Reverdin's operation is according to our author's experience, "equally capable of preventing contractions and deformities of limbs." With a view to such results the contractile tissues are freely divided, and when granulations are fully developed, the grafts are inserted. We should like such favorable reports to be substantiated; as yet we are skeptical, and mistrust the sanguine opinions that come of early experiments.

In the chapter on Wounds, an unnecessarily long but interesting account is given of "*Arrow Wounds.*" Much of the material is drawn from the reports of Assistant Surgeon Bill, U. S. A. The ingenious suggestions of this officer in regard to the extraction of some rare forms of projectiles will perhaps be found valuable to medical officers serving on the frontier.

In "Gun-shot Wounds" of the skull, the use of the trephine would seem, from the statistics of the late war, to be more advantageous than many surgical authorities admit. Professor H. is a decided advocate for surgical interference in such head injuries, and we think his views tenable.

In penetrating Chest Wounds, he favors the permanent closure of the wound as a general rule, but points out with clear discrimination the cases in which the rule should be departed from. Bloodletting for hemorrhage, or apprehended inflammation, in this class of injuries, he rejects, as do most American surgeons.

The subject of "Venereal Diseases" is briefly but well handled, and the views as to treatment are for the most part in accord with those of the most experienced practitioners in this country. As to the use of mercury, it is wisely and succinctly stated, "that in every stage of this malady, in the primary and secondary not only, but in the transitional and tertiary also, there are circumstances under which mercurials are useful; and moreover, that in each of these stages there are conditions under which it is not only not useful, but in which it is absolutely pernicious." The manner of giving the agent, as well as the character of the cases in which it is contra-indicated are as clearly stated as the requirements of a text-book demanded. The question of the advisability of the use of mercury in the primary disease is the only one likely to evoke discussion.

Next comes the important chapter on "Lesions of the Vascular-System." Much space is occupied with the rules of Valentine Mott for the operations upon vessels. The author pertinent to these rules, gives illustrations of some instruments for "*dry dissections*," and also of an aneurismal needle, which he calls his own. All of this might have been dispensed with. The old trustworthy ligature is wisely preferred to torsion or acupressure.

In the treatment of Aneurism, as a rule, the ligature he thinks should be preferred to compression. This latter procedure is not considered as free from danger as has been represented. Digital compression is the preferable mode when the ligature is rejected. Dr. Jonathan Knight, of New Haven, is credited with the first successful attempt with this method. No reference is made to a plan of using this form of compression often practiced by the Irish surgeons, an essential feature of which consists in interrupting the operation during the night so that the patient may enjoy rest.

The "new method" of Dr. Howard, as reported in his prize essay, published in the Transactions of the American Medical Association for 1870, which consists in surrounding the vessel and its sheath by a loop of silver wire, and closing the wound by primary adhesion, is given in full. But, strange to say, the plan of Mr. Lister, with the carbolized cat-gut ligature, is not mentioned. This is the more remarkable as this plan is now attracting much attention. We are not prepared to determine whether the value of Mr. Lister's method consists in the simple use of the animal ligature or in the fact of this being carbolized. Our theory rather inclines us to doubt the importance of the antiseptic agent, as we have so often seen the animal ligature become encysted and absorbed, and this, prior to the prevalence of the anti-septic mania. We are, however, clearly of opinion that the principles urged by Dr. Howard and Mr. Lister are destined to play a very important role in the future treatment of aneurismal disease.

"Fractures" next receive attention. The profession are already so familiar with the valuable contributions of the author in this de-

partment that we need say but little upon the subject. We must express regret, however, in passing, that Professor H. still entertains objections to the "*immovable apparatus*" in its several forms. He speaks of it as having been in his hands "eminently unsatisfactory." And yet in that wide field of his observation and practice, Bellevue Hospital, as we learn from other and good authorities, the "plaster of paris bandage" has proved eminently satisfactory.

We were once disposed to agree with Professor Hamilton and give preference to splints of leather or felt, but we now hold the plaster bandage, in some of its forms, in highest estimation. Its capacity for thorough adaptation to all parts of a limb, its promptness, in solidifying, the support it affords, the certain barrier that it is to motion of the fragments, the limitation it fixes to the period of confinement, and the results in general determined by larger experience, induce the belief that in spite of the very high authority of Professor Hamilton it is destined to gather advocates and soon to overthrow all prejudicial opposition. The voice of the great German school, and that of Mr Gamgee and others of England, will not be kept down. Already the echo of approval is heard in our essentially practical country where it is being subjected to the test of a thorough experiment, we predict that it will devolve upon American surgeons to fix its value or to seal its doom.

The second part of Professor Hamilton's volume is devoted to "*Regional Surgery.*" Our space will permit only of an allusion to a few points of interest.

Treating of "scalp wounds," the author to our surprise, affirms that whether these be "large or small sutures, are in general inadmissable." We have much greater dread of irritating plasters and heating compresses.

In hair-lip operations, *silk* is used instead of wire sutures or pins, and the suture is passed through the entire thickness of the lip. The question as to choice between silk and wire no doubt rests upon the length of time the suture is permitted to remain. Professor H. removes his silk on the third or fourth day, and does well in so doing. Pins we have never employed.

In URANOPLASTY, Dr. Warren's early and brilliant successes are justly prized. The claims of Professor Langenbeck as to the modification of Warren's operation, by the method of "*Muco-periosteal Uranoplasty*," are vigorously combated. Although Warren himself spoke of raising the "mucous membrane" simply, he, in the opinion of our author, elevated the periosteum as well, or, in other words, actually performed Langenbeck's operation. The mucous membrane, in the living subject, it is affirmed, cannot be raised without the periosteum. The German surgeon is discourteously accused of a "*pretended misconeeption*" in regard to Warren's procedure.

For the treatment of "internal hemorrhoids," the ligature is deemed satisfactory. We think it just as well that the clamp used by Mr. Smith and some other English surgeons is not considered worthy of mention. The use of the "Galvanic Cautery," for hemorrhoidal operations, is considered a "complex and cumbrous method of accomplishing what can be done equally well by a much more simple process." In this opinion we most heartily concur. We denounce the efforts now being made to introduce the galvanic cautery and the electrolytic process in dealing with many surgical diseases, heretofore successfully relieved by simpler appliances, as mere tricks of the specialists and charlatans. Let the general surgeon avoid the trap that is set for him.

In "Organic Stricture" of the urethra, "gradual dilatation" is preferred to the popular modern operations of incision and divulsion. Neither caustic, incision, nor divulsion, insure more than dilatation against subsequent contraction. The "*Bougie à boule*" we are surprised to find not referred to as a means of exploration of the urethral canal. The olive-shaped bougie is spoken of in this connection, but the drawing representing it is marked "*Bulbous Bougie.*" The instruments are distinctly separable, and the ball bougie is the truly efficient means for exploration.

Squire's Vertebrated Catheter has answered well in Professor H.'s hands, but he entertains "apprehensions that the links may become detached and remain in the bladder." There is no allusion, even under the head of enlarged prostate, to the self-retaining catheters of Mr. Holt, Sir Henry Thompson, and other modern surgeons. The Aspirator of M. Deulcfoy, in connection with the surgery of the bladder, is likewise passed over in silence.

In the treatment of "Hydrocele" the operation by *incision*, or, as Professor H. with appreciable self esteem would have it, "*my long incision*," is preferred, as injection has too often failed in his hands. We, nevertheless, shall continue to prefer giving our patients the chances of the milder operation, and ourselves the trouble of repeating this, should it fail at times; incision we have always as a last expedient. The confinement and suffering, as contrasted in the respective methods, cannot permit us to adopt the views of Professor Hamilton. Of late we have been much pleased with the plan of repeatedly injecting very small portions of tincture of iodine by means of the hypodermic syringe, and without emptying the sack, unless in very large collections. During treatment, the patient may attend to his usual avocations.

We have no time for further analysis, but must leave the book to the examination of the profession. If we mistake not they will agree with us that it does not increase the reputation of the author. We might show how forced and even puerile are many of the efforts at originality. The wood-cuts, while excellent, are too numerous and often introduced merely with the view of illustrating the author's modifications of instruments, that in their original design would serve the profession equally well.

Students, we trust, will not be too much taken by the pictures, especially the display of "*Arrow-heads.*" If mere condensation is sought after, then we unhesitatingly say that the moderate-sized volume of Dr. Ashurst, but recently issued, is a preferable text-book, for it better represents the science of modern surgery.

We cannot forget to compliment the publishers on the style of their work. The printing is admirable, and worthy of the high reputation of the well-known house.

ART. XI.—*Remarks on Strictures of the Urethra of Extreme Calibre, with Cases, and a Description of new Instruments for their Treatment.* By F. N. OTIS, M. D., Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York, etc. 8vo: pp. 25. New York: D. Appleton & Co. 1872.

Professor Otis has in this interesting *brochure* rendered a service to the profession. He has shown himself an accurate clinical observer of a disease of high surgical importance, and one that has ever afforded a wide field for bad practice.

The existence of organic stricture in a urethral canal that throughout its extent will admit the passage of a large-sized sound, is a fact too seldom recognized. We remember once having demonstrated such a condition, in the case of a young man of small statue who had long suffered from urethral trouble, for which he had been treated by several surgeons of good reputation, all of whom had decided against the existence of stricture. While under our care, he visited his home physician in the country and explained his condition, telling him that he was able to pass a No. 15 sound of the American scale, and that he was going to return to the city to have a deeply-seated stricture cut or ruptured. The doctor held up his hands in horror, after examining the No. 15 sound, and pledged his existence against the theory of stricture: he maintained that all the symptoms were referable to the forced dilatation of the urethral canal. Nevertheless my young friend returned to my care, had his stricture cut, and has continued quite satisfied with the treatment. Such exceptional cases are too much for the mere routine practitioner who may be able to treat successfully the ordinary forms of surgical disease.

Prostatic uneasiness, urethral tenderness and discharge, fancied or real spermatorrhœa or impotence, render many individuals miserable. And such conditions often come of the merest narrowing of the urethra. The *bougie à boule* alone clears up the mystery in many such cases, and puts us in the way of affording relief. The profession, we are glad to see, are beginning to appreciate the value of this instrument. Mr. Teevan, in a late number of the London *Lancet*, figures this and many other French instruments for the urethra, which he justly says are too little known in England.

The remark is equally applicable to America. No matter where the *bougie à boule* originated, it has certainly been longer and better valued by the continental surgeons than by ourselves. It is a necessity for every one who would practice urethral surgery with success.

Professor Otis at the beginning insists upon the importance of recognizing the *individuality* of every urethra, and points to the largest sized bulbous sound as the only trustworthy means of measurement. No popular standard of urethral calibre should be admitted, and the frequency of contractions at the meatus must never be forgotten in estimating the abnormal narrowings of the canal. The resiliency of some strictures is remarkable, and when dealing with one of the ring-like form, the great value of the bulbous bougie is strikingly exemplified. These strictures of large calibre are with difficulty cured. Progressive dilatation often fails, and urethrotomy, or divulsion, becomes necessary.

After such methods of operating have been long the fashion of the day, it may surprise not a few to learn that none of the instruments in general use have size or capacity of expansion sufficient to thoroughly divulse or rupture certain strictures of this kind, occasionally met with in practice. Neither the urethrotome of M. Maissonneuve, nor the powerful divulsors of Mr. Holt and M. Voillemier are found adequate, for the plain reason that there are strictures in urethras whose normal calibre exceeds the measurement of these instruments. The divulsing shaft of M. Voillemier, measuring thirty-two millimetres in circumference, is the largest instrument of this kind in general use, and it failed of capacity in one of Professor Otis' cases. While such an instrument might distend, or imperfectly rupture a resilient stricture of large calibre, it would fail to cure, because thorough division is necessary.

To meet the indication in such exceptional cases, Professor Otis proposes an instrument which is at once a *divulsor* and a *urethrotome.* Its capacity of divulsion exceeds that of any known instrument, its compass being from twenty-three to thirty-four French scale, which corresponds to thirteen and twenty-one English. Its advantages are that it makes the urethra *tense*, and establishes the stricture as a fixed point; then attacks a tense, instead of a flaccid structure, which it incises, "*at a predetermined point, depth and extent, instantaneously.*"

The instrument is fashioned after the plan of the ordinary parallel ruler, the idea not being new, as may be perceived by reference to the original divulsor of M. Perrève, modified by Rigaud. The arrangement of the handle, and the addition of the curved registering arms are, however, novel and ingenious. The register indicates at any time the precise degree of separation of the parallel steel bars, and thus the operator is made aware of the degree of dilating force employed. One of the bars is hollowed for the adjustment of the urethrotome, which, by a screw-power, is

moved at will along its entire length. The urethrotome has a concealed spring-blade, and is essentially the one some time since suggested by Dr. Geo. A. Peters, of New York. The blade, in obedience to proper mechanism, rises out of the groove and displays a width of two lines.

In its employment, the parallel bars are first made to thoroughly expand the strictured urethra; then the canula of the urethrotome is so moved that the concealed blade can be projected and brought into position, so as to divide *from behind forwards.* Should the division not be complete, the blade can be made to operate again, and in the reversed direction. An accurate description, without the exhibition of the instrument, is difficult; we can only pronounce the contrivance ingenious and effective. Messrs. Tieman & Co. are the manufacturers.

In commenting on the merits of his instrument, Prof. Otis, in a note affirms that the only "*dilating urethrotome*" of which he finds any record is that of M. Reybard, and that this has fallen into disuse from its necessitating long and deep incisions of the urethral canal. We rather incline to the belief that M. Reybard's instrument has been superceded by others found to be more generally applicable to the strictures ordinarily met with. Strictures really requiring the use of such a contrivance as this, or the one of Prof. Otis, are quite exceptional. Many operators think that long and deep incisions are at times necessary, and there is no question as to the success attained by M. Reybard. If we approve of the practice, so common now, of forcible dilatation and splitting of the canal, (we cannot coincide with the views of some, that in Mr. Holt's method the mucous membrane of the canal is left intact,) can we condemn an instrument simply because it cuts freely? We desire not to speak in special advocacy of the plan of M. Reybard, but we dwell upon it because the originator deserves the honor, to a large extent, of establishing the principle of making the tissues tense, in order to effectually divide them. But, to go further, we may raise this question with Prof. Otis: Are not several of the urethrotomes in use dilating ones? Take Civiale's most excellent instrument. When we project its concealed blade, and cause it to traverse the stricture from behind forward, does it not distend while it cuts? With an instrument of this pattern, of sufficient size, can we not obtain all the distension required in any given case? The "*Urethrotome à Echappement Excentrique*" of M. Charriere, when cutting from behind forward, necessarily distends as it advances. That of Leroy, (d' Etiolles) constructed like a forceps, and having a sharp and a blunt blade, divides the stricture while dilating its calibre; the extent of the dilating force, as well as the depth of the incision, is regulated by the degree of separation of the blades. Let it be a bridle, or an annular stricture, for example, the edge or marginal portion is cut before the base, because this is made tense as the knife advances and enters the abnormal

calibre. In short, these several urethrotomes do their work just as the *Lithotome Caché* of Frére Come cuts the prostate gland, and the *uterotome* of Simpson the neck of the uterus.

The "dilating urethrotome" of Prof. Otis, as represented in his pamphlet, is applicable only to strictures of large calibre anterior to the bulb, but he informs us that the Messrs. Tieman & Co. will construct curved instruments after his pattern suitable for deep strictures, and those, too, of smaller calibre.

In the latter portion of the paper, Prof. Otis considers the treatment of strictures of an opposite character to those already referred to, viz.: such as are "*practically impermeable.*" He here considers the merits of the several contrivances of M. Maisonneuve, Mr. Holt, Sir Henry Thompson, Prof. Bumstead, and Prof. Gouley. All instruments used for tight strictures, and having a filiform guide-bougie to precede them through the contraction, are deemed objectionable, as no reliable screw for attaching the guide can be made of less circumference than *seven millimetres.* A screw of such dimensions is too large to pass without force, and, as there is no certainty of the presence of the guide-bougie in the bladder, it is always unsafe to urge on the metallic portion of the instrument intended for dilatation or divulsion. We may add, as another objection, the danger of the guide breaking just at the screw attachment.

Sir Henry Thompson's probe-pointed catheter, with Prof. Bumstead's filiform guide, is a good instrument, if it will pass easily, for by the escape of a very few drops of urine we ascertain its position in the bladder, and can then venture to force on the dilating portion of the shaft. There is this objection, however, according to Prof. Otis: The shaft is too weak to admit of our urging it on through a tight stricture. There is danger of it breaking at the eye, before this section reaches the bladder. To provide for the eye, the tube has the dimensions of *ten millimetres.* We have never encountered these evils referred to, and think they must generally pertain to the exercise of unusual force by unskilled hands. The modification of this catheter, by the addition of a urethrotome, as accomplished by Dr. Mastin, of Mobile, makes a most valuable instrument. Prof. Otis does not allude to it. The stricture, once passed by Dr. Mastin's instrument, the difficulty is overcome, as the blade of the urethrotome now does the work. With the original catheter of Sir Henry Thompson, or Prof. Bumstead's modification, we may succeed to-day and be disappointed to-morrow, in a second effort to enter the stricture. The golden rule in dealing with strictures of such small calibre is never to yield the advantages you have once gained; do not hope for the morrow, but accomplish the work possible for the day. The instrument of Dr. Mastin we have never seen with the filiform guide attachment, though many months since we suggested this addition to the Messrs. Tieman & Co. Such an instrument would avail in the very large proportion of strictures

of small calibre, and could only fail in a very few "practically impermeable" ones.

Professor Gouley's "Canulated Staff" and "Retention-Catheter" are next discussed. If the staff is small enough, it is readily passed over the whalebone guide-bougie. The first staff can then be withdrawn, and a second one of larger size be made to take its place, and thus secure sufficient preparatory dilatation. The difficulty, and the objection to the instrument in Professor Otis' view, lies in the doubt that must exist as to its entrance into the bladder. The "Retention-Catheter" of Professor Gouley is more trustworthy, but this has the eye located three-quarters of an inch from the point; to admit the presence of the eye, and yet secure necessary strength, the tube is constructed too large to be available in the so-called impermeable stricture.

To surmount the many objections attached to the several instruments named, Professor Otis offers his "*dilating Catheter* of only *three millimetres* in circumference at the point, and gradually increasing in size, so that at six inches it is *six millimetres*." It is a simple silver tube, with a steel stylet to traverse its entire length and give it the necessary strength to permit of its being "*insinuated*" through a tight stricture. The stylet is removed when the instrument enters the bladder, and a small syringe now applied to the proximal end to verify the true position of the tube. Upon the withdrawal of the piston, urine should appear in the barrel of the syringe. If advisable, in extremely close or tortuous strictures, the whalebone guide-bougie of Professor Gouley can be first passed and the tube slid over this. This delicate tube is not to be used as a retention catheter; indeed its minute size would preclude this. The advantages claimed over other instruments are smallness of calibre with sufficient strength. It being a tube, or catheter, and not a sound, its position in the bladder is easily verified by the escape of urine.

Without practical experience with this new instrument, we are inclined to estimate it thus: When the delicate tube is threaded upon the whalebone guide-bougie we see but little advantage it possesses over Professor Gouley's staff of smallest calibre. Taking it for granted that the guide has passed true, the staff, or the tube either, will alike enter the bladder and serve as preliminary dilators. The mere verification of the position of the tube by the escape of urine amounts to nothing practically, for the previous advance of the guide-bougie has already insured the true position. If the guide has not passed true, then staff or tube will alike wonder as we force either of them on threaded upon the bougie.

When used as an independent instrument, without the whalebone guide, its passage through the "*practically impermeable*" structure, has to be *forced*. Professor Otis says that with his finger in the rectum he "*insinuates*" it through the contraction. He may prefer the use of this term, but the operation at last is simply

that of "*forced catheterism*," which can be done as well with many of the larger instruments in use. We have seen such operations prove eminently successful, but at best their danger is not to be estimated. If the profession are willing to admit the correctness of such practice as a general rule, then the question arises whether there is any practical advantage which an instrument of a calibre of only *three millimetres* will afford over one of six or ten *millimetres*. In the skillful hands of Professor Otis his catheter may always pass true, but can such an instrument be used with safety by the majority of practitioners?

One possibility too seems to have escaped Professor Otis' notice. The small tube may be "*insinuated*" into the bladder through a false passage, or may make an indirect passage for itself through the prostate gland or adjacent structures. Now the urine flows, as the piston of the syringe is drawn back, and the operator is deceived as to the success of the effort so important as preliminary to the divulsion that is to follow. Suppose the divulsing instrument now follows the same indirect passage, and the proceeding for the thorough rupture of the contraction is instituted? What value would Professor Otis now attach to those few drops of urine that his tubular instrument had brought him?

We might insist upon even another possibility. The tube may be "insinuated" between the bladder and rectum. No urine escapes, and the operator recognizes the fact that he has missed the bladder. He is wiser, it is true, but has his informatfon not come rather late for his patient?

Without meaning, then, to detract from Prof. Otis' efforts and ingenuity, and without doubting for a moment the value of his instruments when in his own hands, we cannot refrain from insisting that too much importance may attach to mere pieces of mechanism. Such are often valuable, and we have every day to bless the head that devised and the hands that fashioned; but let us cultivate assiduously the great principles which should guide us in their use, and that skillful manipulation which often enables one operator to accomplish, with a rough device, what another fails to perform with the most ingenious and delicate invention.

We are yet disposed to think that in dealing with deep strictures of very small calibre, the tortuous character of the canal requires that our instruments have *flexibility* as well as *tenuity*. The repeated use of the elastic filiform, or the whalebone bougie, and the adherence to the motto—"*Festina lente*"—will in time enable us to introduce the proper divulsor or urethrotome, without running the extra risk of forced catheterism. Leeching the perineum, and the use of many local and general means of known value will often assist our mechanical operations.

If the question be one of retention of urine and a full bladder, forced catheterism with such an instrument as Prof. Otis' may, in skillful hands, be found available. The opening of the perineum

behind the contraction, or the use of the aspirator above the pubis, would perhaps by many surgeons be considered preferable as a temporary expedient.

In conclusion, we hail this effort of Prof. Otis as an evidence of progress in the treatment of a very important surgical affection, and, as associated with such progress, we are pleased to observe the very conspicuous position occupied by American surgeons.

ART. XII.—*Nouvelles Études sur le Choléra Asiatique. Le Sulphure noir de Mercure Proposé pour Préserver L'Italie de ce Terrible Fléau, par M. le Docteur Socrate Cadet, Professeur ordinaire de Physiologie à l' Université royale de Rome, membre de l'Acad. imperiale de Rio Janeiro, etc., etc. Traduction du Compte Charles des Dorides. Rome.* 1872. [*Recent Researches upon Asiatic Cholera. The Black Sulphuret of Mercury Proposed to Preserve Italy from this Terrible Scourge.* By Dr. SOCRATES CADET, Professor, etc. Rendered in French by Count CHARLES DES DORIDES. Rome, Italy. 1872.]

If the statements are correct in this paper, which we have received from Rome, the preventive and curative influence of the black sulphuret of mercury (Ethiops mineral) in Asiatic cholera are very striking and should receive general attention. Its good effects are based upon the earlier doctrines of Vallisneri, (who had proposed it as an infallible parasiticide) with regard to the *germ* origin of this and similar diseases, and its use has been extended to the prevention of "the cattle disease, yellow fever," etc. "It is to be hoped, then, that for the good of humanity the use of this anti-cholera remedy, *par excellence*, an agent as powerful as it is inoffensive, will be adopted by all practitioners." We are at the pains to translate and condense the observations made in this paper, with the hope that they are well founded.

Mercury, in some shape or other, is already regarded as an efficient agent in changing the secretions in cholera; ethiops mineral is one of the safest and most innocuous preparations of it that can be selected, and its employment is here extended to small-pox, croup, diphtheria, typhoid and yellow fever, etc. The Count C. des Dorides, who has translated the *brochure* into the French tongue, also asserts that in the recent epidemic of variola in Rome the ethiops mineral was employed with the greatest success both as a preservative and a curative agent; in children it lessened the severity of the disease and prevented pitting. It was also specially efficacious in croup and in diphtheria, the frightful symptoms of which disappeared after three or four doses had been administered.

M. Cadet has been urging upon the profession the use of this agent since 1854, as a proper means to be employed to prevent and

cure contagious diseases both in man and in animals. We recently had occasion to translate from an Italian agricultural journal, some articles showing the undoubted and peculiar power of the sulphuret of mercury in diseases infesting the lower animals and in destroying the parasites destructive to trees, grain, silk-worms, etc. M. Cadet has been particularly prominent in applying this principle to the pathogenesis of cholera, and he finds the mineral especially serviceable when it is employed at the commencement of the disease.

The statements made in the pamphlet are based upon the results of comparative experiments, made with ethiops mineral and other remedies during many epidemics of cholera in several localities, and in various well-known institutions in Italy. The percentage of recoveries from cholera in some fifty or more instances in hospitals, garrisons, etc., where a large number of cases were treated, in which the mineral was not used, ranged from thirty to fifty-eight per cent. In similar establishments, where the ethiops was employed, the percentage of recoveries attained the extraordinary maxima of from ninety-six to one hundred per cent. The medicine is given in the form of pills, two to three a day—these being composed of 1 gramme of ethiops, ½ gramme of gum tragacanth with a little simple sirup. Mercurial ointment was sometimes rubbed upon the abdomen. The dose for adults of the finely powdered drug varies from twenty to sixty centigrammes a day as a *preservative;* and in doses varying from one gramme twenty centigrammes to three grammes sixty centigrammes, and more at a time according to the case, as a *curative.* Some striking instances are also furnished of the apparent efficacy of the mineral in preventing the disease from infecting large establishments which were greatly exposed to it during its most fatal periods.

The black sulphuret is claimed to be the best and most infallible of specifics against cholera, *because*—

1st. This precious remedy has prevented, as has been proved, the multiplication, increase, and even the development of cholera germs in individuals who have used it.

2d. *Because*, in three localities at least that we know, it has succeeded in arresting *ipso facto* the march of cholera from its first appearance.

3d. *Because*, by means of it, we have been able in different places not only to preserve the life of persons attacked by this scourge, but, what is better still, to see that they are restored to the same condition of health as before the attack.

Several other advantages attending its use are also mentioned: That both of its elements are undoubtedly parasiticide; that no condition of our organisms oppose its use; that as it does not disturb any of the functions of life, it can be taken in suitable doses during a long period as a preventive remedy; that being inoffensive, cheap and easily prescribed, it can be used among the

poor; that experience has shown that it can be given with tamarind extract, orange or lemon juice, without fear; that its innocuity is such that no apprehensions need attend mistakes with regard to its employment; that the remedy radically destroys parasitic choleraic germs; that it is followed by no reaction, and it prevents the tendency to a typhoid condition; that it destroys the infectious property of cholera dejections; that its vapor can be used to disinfect domestic animals; that it has no taste, can be used in small doses, it is not necessary to be made into pills, but can be taken upon the tongue, etc.

It is besides proposed to use this medicine to prevent the introduction of contagion into Italy by compelling its administration to all those entering the country.

Finally, the concurrent testimony as to its value from a number of physicians in charge of hospitals and public institutions is herewith presented. We hope that through the instrumentality of this condensation of the views of the author, presented here, the agent may be tested in this country also.

ART. XIII.—*Letter from the Secretary of War Communicating, in Obedience to Law, Information in Relation to Quarantine on the Southern and Gulf Coast.* From the author, HARVEY C. BROWN, Assistant Surgeon, U. S. A.

This report is interesting to the Southern people, physicians as well as civilians, inasmuch as it treats of questions affecting deeply our interests.

We make a brief statement of its contents, having had the satisfaction of an interview with the author whilst on his tour for the purpose of visiting the ports of the South, to confer with physicians and with the authorities, and to procure information on questions relating to quarantine and yellow fever.

Surgeon Brown came by order of and under appointment of the Surgeon-General to "ascertain all facts having reference to the outbreaks of this disease in such ports or towns, and whether any system of quarantine is likely to be effective in preventing invasions of yellow fever, and, if so, what system will least interfere with the interests of commerce at said ports." He has performed his task, we think, with great care and fidelity, and the paper before us contains much useful information on the questions of which it treats.

The Surgeon-General, however, decides that on account of the many vacancies in the medical corps, it is for the present impossible to furnish officers to carry out a rigid governmental system of quarantine; so that Dr. Brown's ably recommended measures are

not yet practically enforced, but will undoubtedly produce their fruit in due season.

From our experience of past epidemics, we hold that the author has been mislead in supposing that "the epidemic of 1871 (in Charleston) was remarkable from the great blending of other types of fever with the true yellow fever." The blending was not greater than in other epidemics; and that some actually "denied that there was any fever at all," is simply absurd in the face of the facts.

He quotes often from the papers of Hume, Dickson, Fenner, Nott, Simons and others, contained in the old files of the Charleston Medical and other Southern journals; and this gives an additional indication of the value of local publications in procuring, embodying and preserving information of a local character, and which serve subsequently as the elements of our social or medical history.

His conclusions are thus stated:

"The result of my inspection has been such as to convince me—

"1st. That in the vast majority of epidemics, if not all, that have occurred in the United States, the germinal principle of the disease was imported from elsewhere, and was not due to local causes.

"2d. That a system of quarantine can be organized which will prove effective in preventing invasions of yellow fever.

"3d. That a properly organized system, so far from interfering with the interests of commerce, will prove really beneficial to the commercial prosperity of ports where established.

"4th. That the present quarantines at the South, being established by either State or municipal authority, lack that uniformity which is absolutely necessary to their efficiency, are not founded on rational views of the pathology of the disease, and are generally defective in their administration, and that, consequently, a system of a different character must be adopted to attain the end desired.

"5th. That yellow fever needs to be planted in a favorable soil in order to become epidemic, and that, consequently, the danger from the disease is measurably lessened in proportion as attention is paid to the local hygiene and sanitary condition of those parts of the ports or towns which, by reason of the character of the inhabitants or other causes, are usually the habitation of the earlier cases.

"I am aware that, in enunciating the first four of the above propositions, I am in opposition to the views of some of the ablest and best minds at the South, who have had the largest experience in this malady; and it is with great diffidence that I feel obliged to differ from such distinguished gentlemen as Professor E. Geddings and W. T. Wragg, of Charleston; Doctors E. A. Anderson, of Wilmington, North Carolina; R. D. Arnold, of Savannah; and Warren Stone, of New Orleans; but, believing that the history of the epidemics in the United States warrants the conclusions to which I

have arrived, and that a very decided change has taken place of late years in the minds of the profession on the subject of the portability of the yellow fever poison, and the consequent value of quarantine measures, I propose, before entering into a consideration of the subject of quarantine, to present a brief abstract of the history of the epidemics that have occurred in this country, so far as any such can be obtained."

We are of the opinion that both parties are in error, who believe either in the exclusive imported or local origin of yellow fever. After all the discussion it is clearly proved both that it may be, and oftener is, imported; but also that filth and garbage, newly opened drains and sewers, can and do also either produce it, or favor its reproduction, germination and spread. Let the authorities guard against both sources of infection, judiciously, thoroughly and in time, and by all the means at their command. We think this is a simple, clear and true statement of the question. We are surprised that any should adopt exclusively either the importation or the non-importation theory. For ourselves, from the plain and distinct testimony of numerous observers, we have long held that both modes of production and propagation were true.

Dr. Brown discusses and applies the germ theory with reference to the views of Sanderson, Beale, Hallier and others:

"With the abstract truth or falsity of these two theories of disease we are not at present interested. They both agree in ascribing the origins of contagious disorders to organic living particles, and whether these are called microzymes, bacteria, or bioplasts; whether they are of fungoid growth, obtaining entrance to the body as parasites; or whether germinal masses, 'derived from normal cells, and due to a series of changes in existing matter under new circumstances,' is of little consequence to the inquiry before us. Without, therefore, entering further into this discussion, it will be proper to inquire into the relations that these contagious particles may bear to the subject of the spread of yellow fever. Assuming for a moment the fact of their existence, they may escape from the organism in which they have been developed in various ways. As Cohnheim has demonstrated that bodies as large as the white corpuscles of the blood may migrate through the walls of the capillaries in inflammation, it requires no credulity to believe that these particles, which are infinitely smaller, may also thus escape into the surrounding tissues; especially when the surface capillaries are congested during an attack of fever. Once outside the vessels, it is an easy matter for them, aided by their amœboid movement, to make their exit from the body, or be thrown off with the epithelial scales from the cuticle. Perhaps they may be eliminated from the blood by the action of secreting and epithelial cells without the vessels. In whatever way they escape from the body, their vitality is so great that they will live and multiply for many days when so removed. In a partially-desicated condi-

tion they may float in the air; they may impregnate water and food, attach themselves to clothing, bedding, or other articles around a sick-room, and, existing thus under so many and such different conditions, have unlimited facilities for gaining access to the bodies of other persons favorably situated for their reception. Sanderson and Chanveau, in their experiments on the cattle plague, have shown that the amount of contagious material necessary to produce disease in another individual is extremely small. 'A mere trace of serum is sufficient to propagate the cattle plague.' This is further manifested in the very small amount of morbid matter required to infect a person in the case of a dissection-wound. Consequently, assuming that such morbid particles are given off from a person sick with yellow fever, it is easy to conceive how extensive may be the morbific influence arising from a single patient. In times of epidemic prevalence, the air will become filled with these floating particles of contagium. In consequence, where a ship leaves an infected port, and her hatches are battened down after her cargo is stowed, she carries within her hold, hermetically sealed, a portion of the air of the infected town, heavily charged with these floating particles. Many of these sink to the bottom and impregnate the bilge-water, or become incorporated with the filth which exists on the sides and bottom of the vessel. Individuals who leave an infected port carry with them in their clothes millions of these little particles, which grow and multiply in whatever position they are placed, and may even acquire increased virulence after their exit from the body in which they were developed."

The following remarks are very pointed and worthy of attention. Prof. John McCready, of this city, has very ably urged similar views with regard to the persistence and vitality of the germ:

"There may also be certain circumstances connected with locality or population which will favorably influence the reproduction of contagion. Peculiar meteorological conditions, defective drainage, poisonous gases, rotting vegetable *debris*, can no more originate yellow fever than they can small-pox, but they may so vitiate the vital capacity for resisting disease as to render the organism peculiarly receptive to the influence of a morbid poison.

"The vital and all-essential fact in the etiology and geography of yellow fever is that which relates *to the implantation of the epidemic germ, or the fomites*, in a locality where temperature, humidity, and personal conditions favor their pestilential propagation."—Harris, United States Sanitary Commission Memoirs, p. 242.

"Among such personal conditions may also be considered the influence of fear; the psychical depression caused by dread of an epidemic operating probably more powerfully than any other predisposing cause in affording a congenial resting place for the germs of the disease. It should also be borne in mind that, of the total population of any Southern city, but a small portion is really sus-

ceptible, the balance being composed of acclimated persons. The number of cases is apt to be in direct proportion to the number of unacclimated residents.

"While it has been uniformly found that a temperature below 32° Fahrenheit has stopped the progress of an epidemic, it is probable that the commonly accepted belief that the poison of the fever is thus killed is not altogether true. The vast majority of the germs unquestionably perish, but some may continue to exist under a lower condition of vitality, and passing the winter in a hybernating state, become revivified by the renewed warmth of the following spring, or under certain circumstances they may slumber for a much longer period, until roused into action by circumstances favorable to their development. It is found, however, that most commonly in such cases these particles have lost a portion of their contagious vitality, and are no longer capable of originating other germs that can propagate the disease. Hence the cases that occur under these circumstances are sporadic, and the disease does not assume an epidemic character. This is not always the case, for occasionally outbreaks of the most severe type have occurred when it was probable that a long time had elapsed since the original germs of infection had been received. In this we may account plausibly for the appearances of the disease on ships at sea, which have always been seized upon as favorite examples by those who advocate its spontaneous development.

"The germinal principles of contagious diseases differ remarkably in their power. Some are vigorously infectious, others very feebly so. It is equally probable that, under different circumstances, the same contagion may possess much more virulent properties than at others. The germs may retain their vitality for a longer period, or develop a greater capacity for reproduction, and hence, in one year, we have a wide-spread epidemic, in another the germ of the disease may be introduced, but the only result be a few sporadic cases."

ART. XIV.—*An Essay on the Climate and Fevers of the Southwestern, Southern Atlantic and Gulf States, Embracing a Brief Exposition of the Existence and Essential Nature of Malaria, Accompanied and Illustrated with a Medico-Topographical and and Meteorological Account of the Dead Sea Region.* By JAMES C. HARRIS, of Wetumpka, Ala. Charleston: Walker, Evans & Cogswell. 1872.

It is our wish and intention to notice, more particularly, those productions of our Southern authors which are published at the South, and this is but right and proper in a Southern periodical. We had hoped to have found in this monograph some more sat-

isfactory explanation of the nature and cause of malaria—an "exposition of its existence and essential nature" being promised us in the title page. But this, we think, is beyond the reach of any one. We can observe facts and speculate as to their causes and operations, and thus remove or avoid their injurious influences, but farther than this we cannot go.

Dr. Harris' paper is a valuable one, as it contains a history of the topography, soil, local characteristics and productions of many of the Southern States, and particularly of certain special localities, such as forts and army stations in the South and West, which are interesting to the medical observer, inasmuch as the medical statistics of the army afford much light with regard to the existence or absence of malaria, its fatality, etc.

The author writes as follows respecting the nature of malarial fever:

"If we admit that the entire exemption of Forts Livingston, McIntosh and Duncan from intermittent and remittent fever clearly proves, and which, under the circumstances, we are bound to do, that neither a high temperature, a high dew point, or the near approximation of the latter to the temperature are sufficient, either singly or combined, to produce any of the varieties of malarial fever, we are forced either to remain in ignorance of their *efficient* cause, or seek it outside of these, or any other mere atmospheric change of the locality where they occur; but that there does exist, as the remote cause of fever, a gaseous poison, an *intangible element*, the result of decomposing organic remains, we think clear, from the fact that wherever we find a large amount of vegetable matter in connection with certain degrees of heat and proportions of moisture, there we meet with febrile diseases; to this effect we have the concurrent testimony of the profession everywhere.

"From as careful an examination of the history of malarial fever as we have been able to give the subject, it appears that the elements necessary for the production of the milder grades, are a mean monthly temperature of about 60°, in connection with certain proportions of moisture and vegetable matter; and for the higher, an increase of the monthly temperature to 80°, with a high dew point and small complement; and although the former is said to cease prevailing on a reduction of the temperature to 50°, and the latter at 70°, we know that where the heat of the preceding nine months has been greatly over these points, their respective *types* continue to show themselves *sporadically* throughout the winter months."

The plan of *treatment* is as follows:

"If we grant that the long and continued operation of the remote cause is such as to produce in the system the pathological condition that gives to this variety of fever, from the commencement, the continued type, as a matter of course the first and most clear indication to be fulfilled, in its proper treatment, is to restore

the secretions, and break up and remove the local *hyperæmias*, that probably, under the circumstances, are the *proximate* cause of the particular *type* it presents. For this purpose we give eight or ten grains of calomel in combination with a quarter of a grain of the acetate of morphine; this quantity of calomel and morphine we repeat about every four hours, according to the amount of hepatic derangement present, until two or three portions are given. At the end of twelve or fifteen hours after the administration of the last one of these powders, if the bowels are not sufficiently moved, we give a dose of castor oil. After the operation of the oil we then commence and give five or six grains of quinine at midnight, at daylight, and at ten o'clock the next morning; this we repeat the next night and succeeding morning as above. If we now find the tongue improving, and the fever abating, which we frequently do, we complete the cure by the continuance of the quinine a few days longer; but, on the contrary, should the tongue remain furred, and the febrile symptoms but little, or not at all abated, we repeat the calomel and morphine powders again, at perhaps a little longer interval between each dose, taking care not to carry them off after the administration of the last one, with oil or any other laxative, sooner than eighteen or twenty hours. If the calomel thus given brings off free, consistent, bilious (tarry) discharges, we can then generally within the next twenty-four hours bring the system under the influence of the quinine, and abate the fever.

"Where there is much tenderness on pressure over the stomach and bowels, sinapisms and warm poultices, and if there is inflammation, cups and blisters over the suffering organs, are not only useful, but actually necessary.

"The fact that our distinguished and lamented friend, Dr. Boling, entirely failed to cure the mildest case of *continued fever* by the successive daily administration of from thirty-six to forty grains of quinine—no less than that our patients have generally and within a very reasonable length of time thoroughly recovered—has caused us, as yet, to feel no disposition whatever to change our plan of treatment; but knowing in some cases, and under certain circumstances, how difficult it is, from idiosyncrasy, or the former abuse of mercury, to administer calomel and opium in this variety of fever, so as to procure its proper curative effect, without occasionally ptyalizing our patient, to those of our professional brethren who believe that in the early stages of *continued fever*, if febrile excitement be *quenched* and *kept under*, by the liberal administration of quinine, that the *unaided powers* of the *system* are competent to a *cure*, we recommend a trial of the thirty-grain doses of quinine, in combination with one or two grains of opium, as recommended and practiced by Dr. Fenner, of New Orleans."—(New Orleans Medical and Surgical Journal, November Number, 1852, page 318.)

Dr. Harris does not believe in the essential nature of "Conges-

tive Fever." He says that what is familiarly known as a *congestive chill* is nothing more than a prolongation, or perhaps deepening of the stage of chill, and that remittents during their course sometimes fall into a similar condition. Professor S. H. Dickson also refused to admit "that there is any variety of fever to which this title is exclusively appropriate." Our own opinion, which sustains our author, has been freely expressed in one section of a paper read before the South Carolina Medical Association, 1871.

Dr. Harris writes thus: "From an examination of the preceding synoptical extracts, it appears that while some of the writers cited contend for a congestive fever, *ab initio*, others no less experienced deny its existence altogether, or describe a similar condition of the system under the name of malignant intermittent, remittent, or pernicious fever. The want of respect on the part of Dr. Drake for the congestive theory, the advocates of which he *derisively* styles hydraulic or mechanical pathologists, no less than the difficulty experienced by some of the others in the transformation of mere symptoms into an idiopathic disease, is probably to some extent the cause of difference among them. Hence the classification by systematic writers upon congestive fevers, into the cerebral, thoracic and abdominal forms, with sometimes a sub-division of these into varieties, we feel constrained to reject upon the grounds just stated, that the original disease of which they are described as mere species, varieties and sub-divisions, is itself nothing more than a *symptom, a stage of periodic malarial fever, and should be described and treated as such.*"

We subjoin the treatment of this form of the disease advised by our author:

This may generally be effected by the administration, every two or three hours, of from four to six grains of quinine, and half a grain of opium, or its equivalent of morphine, until from ten to thirty grains of the former are taken. Sometimes, in combination with each dose of quinine and opium, he gives from three to five grains of pulverized cayenne pepper, directing the patient at the same time to drink pretty freely of a tea of this article, and to apply a mustard poultice to the epigastrium. This course he has generally found *efficient* to prevent the development of the *congestive* stage. Afterwards, if there is present much hepatic derangement, which is frequently the case, he gives some three or four pills (one every two hours) composed of two or three grains each of calomel and blue mass, to be followed, if necessary, with oil; and then completes the cure by giving, for two or three days longer, more quinine, gradually reducing the quantity each day.

Dr. H. does not use quinine in very large doses during the chill on account of its depressing effects in such quantities. He applies a large blister, then gives: Quinine 2 grains; calomel 1 grain; oil of black pepper 1 drop; camphor ½ grain; and opium ¼ of a grain every two hours through the congestive stage, and continues them

till the patient has passed beyond the period for the return of the next paroxysm; if, during the remission, the pills have not acted, he adds a little oil.

ART. XV.—*First Annual Report of the Supervising Surgeon of the Marine Hospital Service of the United States, for the year* 1872. From John W. Woodworth, M. D., Supervising Surgeon, Washington, D. C.

This pamphlet contains an interesting historical sketch of the Marine Hospital service from the date of its organization since 1798, and as a record of such it will be principally valuable. The surgical and other cases reported are quite brief. In the next annual report a large and useful body of facts will doubtless be presented from so wide a field for medical and surgical observation.

ART. XVI.—*Doctor in Medicine, and other Papers on Professional Subjects.* By STEPHEN SMITH. New York: Wm. Wood & Co. 1872.

We commend most sincerely to the attention of our readers these interesting, instructive and admirably written papers and essays. A book like this, which is calculated to reform and improve the profession in the several subjects, moral and material, of which it treats, should not be sold, but should be distributed so as to produce its fullest fruits.

A few of the fifty-eight subjects treated of are as follows: "Doctor in Medicine," "Employment of Anæsthetics," "Physician and Apothecary," "Care of Infants," "Duties of Coroner," "New School of Obstetrics," "Physicans in Old Age," "Medical Experts," "Crime of Abortion," "Confidential Communications," etc.

As germaine to periodical literature, and as they incidentally suggest very forcible arguments in support of our present enterprise, we *make room* for some extracts from the paper entitled "What shall we read?"

"It will doubtless seem quite superfluous to those who habitually read our best medical periodicals, to urge the importance of this class of publications, and their claim upon the profession. But whoever will institute a careful inquiry as to the number of medical men who, even if they subscribe to, and pay for a medical periodical, read it with care and attention, will be astonished at the result. He will find that few, comparatively, really profit by the journals which they may happen to take, and the proof of the fact will be seen in the practice of the individual. For those who read

with interest our best medical journals are invariably found to be the most successful practitioners, and *vice versâ*. But this indifference to medical journals is not confined to the general practitioners: the person alluded to in the opening paragraph of this article is the type of a class of public teachers, who move in an atmosphere never tainted by such publications. They discard all newfangled notions, as they style the improvements and discoveries first laid before the profession through this medium, and annually repeat to their classes the old and often obsolete theories which they themselves learned when students. These teachers are by no means exceptional, even in our most flourishing schools. We have listened to lectures on surgery, medicine and obstetrics, within a few years, not a whit in advance of the age of Hunter, Cullen, and Denman. Is it not time that this class of professors were supplanted by men who are capable of teaching these branches in the light of modern science? The question has frequently been asked: At what age does a medical man become unable to keep pace with scientific discoveries, and at what age are professors in our medical colleges no longer competent to instruct classes in the latest improvements in the medical sciences? We shall give to both queries one answer: When a medical man reaches an age where his self-conceit leads him to believe that he can learn nothing from medical journals, he is no longer able to keep pace with the progress of the medical science, nor to instruct classes in its latest improvements. In view of these facts, therefore, and of the deliberate advice given from professional chairs, we deem it our duty at this time to enter a plea in behalf of medical journals, as the proper reading of recent graduates, of established practitioners, and even of the professors in our medical colleges. What is the proper office of a medical journal? Undoubtedly it is to be the medium of communication between the members of the profession. Such a medium is now recognized as essential to the progress of every science and every art. It stimulates to active effort, not only in research, by the constant attrition of minds engaged in a common pursuit, but to the practical application of principles and newly discovered facts. It performs in this respect, to the profession at large, the same office that a local organization does to the few, being the medium of mutual improvement and encouragement. The advantages of a medical journal to the general practitioner, who has to grapple with the stubborn facts of every-day practice, are incalculable. They have not unfrequently contributed to his immediate success, by giving him timely information of new and important discoveries. Many of the most valuable methods of practice introduced to the knowledge of the profession within the last five, and in some cases even ten years, have not found a place, as yet, in practical treatises, but must be studied in the original journal where the paper first appeared. It is, indeed, a common remark that the physician who keeps pace with the im-

provements in his art, must be a careful student of medical periodicals. Again, the medical journals fulfill another, and not less important mission. They elevate the tone of professional morality; they cultivate a just and liberal criticism; and finally, they establish a higher standard of attainments. In this view, we welcome the appearance of new and well-conducted periodicals in distant localities, and regard them not only as evidences of the progress of legitimate medicine, but as safeguards against the bickerings of individuals and the encroachments of quackery. And we take this occasion to urge upon physicians living in localities where such publications exist, the duty of sustaining them liberally, both by literary and pecuniary contributions. Finally, they tend powerfully to unite the profession in a common brotherhood for the attainment of those rights and privileges, whether social or political, which are due to legitimate medicine. The triumph of the British medical profession in obtaining the enactment of laws designed to establish it upon a firm legal basis, is a striking proof of the power of medical periodicals to concentrate its sympathies and influences. No country has greater need of such publications than ours, and in no country may they exert a more salutary influence. With free institutions susceptible of infinite modification, the medical profession forming a most respectable element in every community, however remote, may wield a power of unlimited extent. This power it is the province of the medical journals of this country to organize and concentrate, and thus ennoble the profession and advance the best interests of society."

QUARTERLY SUMMARY.

ABSTRACTS, TRANSLATIONS, ETC., FROM FOREIGN AND DOMESTIC JOURNALS.

ANATOMY AND PHYSIOLOGY.

"*Experiments on the Origin of the Heart's Tone.*" (By Dr. WILH. GIESE, of Greifswald. Deutsche Klin, 44. 1871.—Translated from the German.)—Notwithstanding that Chas. Williams, supported by experiment and backed by authority of the London and Dublin Commission on the heart's tones, expressed himself in opposition to the theory of Rouanet, which attributed the first ventricular tone to closure of the auriculo ventricular valves, the latter theory was very generally received as correct. After a lapse of

over thirty years, this theory of Rouanet has been again assailed from two quarters. Dogiel and Ludwig auscultated hearts, in which the venous valves could not close, and still noticed a distinct tone, synchronous with the contraction of the ventricle. Farther, Bayer produced in dead hearts (where the heart's contraction did not concur) a closure of the venous valves by a column of water, and, notwithstanding prompt and complete closure, perceived only a very weak, imperfectly defined tone, which had no resemblance to the clapping first ventricular tone.

The investigations of Bayer were repeated by the author in the summer of 1870, in the Greifswald Pathological Institute, under the colaboration of Professor Landois, but with various modifications.

"The hearts of freshly slaughtered animals (mostly calves) were cut out, a portion of the walls of the auricle removed so as to permit a clear view of the interior, together with the mitral valve; the semilunar valves of the aorta were then removed with narrow scissors, taking care not to injure the aortic walls, so that water pressure could unimpeded cause the closure of the mitral. In Bayers experiments the pressure of a column of water was brought to bear through an artificial opening in the ventricular walls. In the author's experiments a ten foot high tubular conduit, with a three-opening stop-cock, was introduced in the aorta. The heart was so suspended in water as not to touch the walls of the vessel, with the open auricle somewhat below the surface."

By turning the cock a column of water corresponding to one of mercury of 230 Mme. was shut off from the ventricle, allowing the water within the cavity to escape by one of the three openings in the cock, which was provided with a rubber tube. Thus the water of the bath flowed through the ostium venosum and opened the valves. By suitable turning of the cock, the mitral could be promptly reclosed. After repeating this play of the valve by turning the cock, the ventricle became gradually dilated by the pressure of the water column and the mitral at first sufficient, eventually became insufficient. Therefore a single heart could only be used for a limited number of observations.

Auscultation of the valves, closing by this mechanism, was conducted by plunging the end of a stethoscope into the water of the bath without touching the heart.

In three experiments, on closure of the valves a tone was heard, which commenced sharp, but ended ill-defined, it was weak and obscure, of the kind described by Bayer, bearing no resemblance to the first ventricular tone heard in the living animal. With the occurrence of insufficiency the tone could no longer be distinguished. In the hearts of seven animals the tone was thus observed; on the contrary in an eighth heart, in which, at the beginning the mitral was insufficient; it could not be perceived. It appears, trusting to

these results, that the vibrations of the mitral have only a subordinate influence in the production of the first ventricular tone.

Three times the author instituted similar experiments of the semilunar valves of the aorta. The aorta, with a part of the heart walls were cut out, leaving the semilunar valves intact, that portion of the vessel above the valves, as a matter of course placed under water and brought in connection with the above apparatus, so that opening and shutting could be effected at will. The closure of the semilunar valves was each time conjoined with a clear clapping tone, the resemblance of which to the second vascular tone could not be mistaken.—Theile. Schmidt's Jahrb., Bd. 156, No. 2.

The Two Cerebral Hemispheres.—Dr. FLEURY, in a paper read before the French Association, compared the dynamism of the two cerebral hemispheres. Serre and Broca have for a long time pointed out the functional inequality of the two cerebral hemispheres, and a great number of clinical facts confirm their ideas. Gratiolet has observed the same inequality in the development of the brain in the fœtus. The left hemisphere excels the right. Dr. Fleury explains this functional inequality by the unequal distribution of blood in the cerebral hemispheres. Relying on the physical laws which regulate the course of the blood in the veins, and on the results of numerous measurements, he shows that the left hemisphere receives a more considerable quantity of blood than that which reaches the right hemisphere. The measurements taken of the jugular veins also confirm this opinion. Finally, we have to mention the agreement of a greater afflux of blood to the right superior limb.—Brit. Med. Jour., Sept. 28, 1872.

Tricœlian Human Heart. By S. M. BRADLEY, F. R. C. S.—The child, from whom the heart was taken, was born at the full period, of healthy parents. For the first thirty-six hours after birth the child appeared perfectly well, both circulation and respiration being efficiently carried on. At the expiration of this time it became cyanotic, was convulsed, and died at the end of forty-eight hours. The heart was situated naturally, and was of normal size. There was but a single emergent artery issuing from the heart; it gave origin to both the pulmonary arteries, and to the usual aortic branches. This arterial trunk sprang from a single ventricle, into which both auricles poured their blood. The auricles were of unequal size, the right being larger than usual, the left extremely small; a freely patent foramen ovale permitted the passage of the blood from one to the other. The caval veins terminated as usual in the right, the pulmonary veins in the left auricle. The auriculo-ventricular valve approximated the mitral in character; the large single artery was furnished with well formed semilunar valves, behind which the sinuses of Valsalva were easily

seen. The pulmonary arteries were large and close together, one, the left, being at a higher level than the other. The course which the blood would take in this case would be as follows: From the single ventricle blood would be poured into the arterial trunk; thence it would first of all pass into the pulmonary arteries, and partially traverse the lungs, the returning blood being poured by the pulmonary veins into the small left auricle, whence the greater part would flow through the foramen ovale into the right auricle, and thence into the single ventricle. The greater part of the blood, however, would never reach the lungs at all, but would be propelled along the continuing trunk (aorta) into the aortic branches; this systemic blood re-entering the heart in the usual way by the caval veins. The condition of heart which was found to exist in this child is the normal state in an embryo of eight weeks. At this time the aorta and pulmonary arteries are one; the auricular septum is imperfect, and the ventricular septum only commencing to be formed; a condition which is persistent in the batrachia. Five cases of a somewhat similar kind have been recorded.—Brit. Med. Jour., Aug. 24.

MATERIA MEDICA, GENERAL THERAPEUTICS AND PHARMACY.

A New Antiperiodic.—M. DORAN has stated in a note to the Academy of Sciences of Paris (*Comptes Rendus*) that he has never known the *laurus nobilis* to fail in quotidian or tertian intermittents. Cases yielded to it that were fruitlessly treated by quinia. He has no doubt that in quartan ague it would be equally efficient. —The Doctor, Dec., 1872.

Coffee and Sulphate of Quinia.—M. BRIQUET considers the common practice of administering quinia in coffee open to much objection. He alleges that the tannin in the coffee coalesces with the quinia, forming a tasteless and insoluble, and almost inert salt —the tannate of quinia, from which the stomach has as much difficulty in extracting quinia as from powdered bark. It is, he thinks, one of the worst preparations of quinia.—Brit. Med. Journ., Feb. 8, 1873.

Nitrite of Amyl in Spasmodic Asthma.—Dr. JAMES A. DUNCAN, of Toledo, Ohio, relates (Michigan Univ. Med. Journ., December, 1872) three cases of spasmodic asthma promptly relieved by the inhalation of a few drops of the nitrite of amyl.—From Medical News and Library, February, 1873.

Tincture of Chloride of Iron for Corns.—Dr. C. BARBER states

(Lyon Médicale) that he has cured three cases of corns on the toes by the application of a drop of the tincture of chloride of iron applied on the corns night and morning. This application was continued for fifteen days, in one case, when the corns from which the patient had suffered for thirty or forty years were entirely destroyed, and pressure on the part gave not the least uneasiness.—From Medical News and Library, February, 1873.

Carbazotate (Picrate) of Ammonia as a Substitute for Sulphate of Quinine.—In a paper on this subject, by Dr. Dujardin-Beaumetz, in the Gazette Médicale de Paris, it is stated that one of the most obvious actions of carbazotic acid and its derivatives is the retardation of the circulation. Parisel showed this fact some time ago, and demonstrated that one centigramme of picric acid caused death in a frog by stoppage of the action of the heart. The same effects are produced in rabbits by the ingestion of twenty drops of the acid. Picrate of ammonia has the same action, so that in the man the administration of four centigrammes of picrate of ammonia reduced the pulse from 76 to 72 in one instance, and in another from 84 to 76, in the course of half an hour. Tracings taken with the sphygmograph show also that the acid diminishes the intensity of the beats. This slowing of the pulse does not appear to be accompanied by any notable diminution in the temperature. If the doses be too large, or the use of the drug be too long continued, some curious cerebral symptoms are induced, consisting of a sensation of heaviness, vertigo and general debility. The limbs become heavy, great indisposition to intellectual exertion is experienced, and there is a strong desire for repose. Headache resembling migraine is sometimes felt. This toxic influence of picric acid comes on four or five hours after its administration, and some remains of it may be felt even after twenty-four hours. Picrate of ammonia causes a yellow discoloration of the skin and conjunctiva, though this, as well as its emetic effect, seems to be only occasional. On being taken internally, a bitter flavor is felt, with a sensation of heat and burning in the stomach, but it does not cause any relaxation of the bowels. Carbazotate of ammonia is eliminated by the kidneys, and in large doses gives a peculiar smoky tint to the urine. Though it does not appear to diminish the volume of the spleen, it appears to act like quinine in removing the intermittent symptoms; and from his experiments and observations, M. Dujardin-Beaumetz believes he is able to draw the following conclusions:

1. That carbazotate of ammonia is a very effective agent in the treatment of intermittent fevers.

2. That the suppression of the attack may be accomplished by the administration of from two to four centigrammes (one-fith to half a grain) of the carbazotate in twenty-four hours.

3. That in these doses the remedy never appears to have any noxious effects, but is in point of fact better borne than quinine.

4. That this preparation of picric acid is not dangerous.
5. That the physiological action of carbazotate of ammonia presents very close analogies with that of sulphate of quinine.
6. That the use of this remedy should become more general, and that in a large number of cases it is destined to replace the sulphate of quinine.—From the Practitioner, February, 1373.

The New Drug, the Eucalyptus Globulus.—In the Mauritius, we understand that the employment of quinine has been in a large measure discontinued in favor of the eucalyptus globulus, which is considered by many who have watched its administration to have proved of real service, and a good substitute for the former very expensive alkaloid.—London Lancet, February, 1873.

MEDICAL PATHOLOGY, THERAPEUTICS AND PRACTICAL MEDICINE.

A Remedy for Catarrh.—Dr. E. BRAND (*Berlin Klin. Wochenschrift*) speaks in terms of recommendation of the following formula for an anti-catarrhal olfactory, prescribed by Dr. Hagner: R. Carbolic acid 5 parts; rectified spirit of wine 15 parts; strong solution of ammonia 5 parts; distilled water 10 parts. The mixture is kept in a stoppered dark glass bottle. When a catarrh is commencing, a few drops are placed on three or four layers of blotting or filtering paper; the patient, holding this in his hand, and closing his eyes, inhales deeply from it as long as any smell is perceptible. The effect of the treatment is to cut short the acute stage of the cold, to prevent the occurrence of subsequent coryza and bronchial and laryngeal catarrh, while all troublesome symptoms are rendered much milder. The remedy should be applied every two hours.—British Medical Journal, July 6, 1872.

Differential Diagnosis of Anæmic, from Organic Murmurs of the Heart. By JAMES H. HUTCHINSON, M. D.—Dr. Hutchinson, in a lecture on anæmia, states that he has found a peculiarity in cardiac murmurs arising from anæmia, which is but obscurely alluded to by some writers on auscultation. The murmur will be found to be much more intense when the patient is in the recumbent position than when he is either standing or sitting. Having never failed to detect this greater intensity in the recumbent position in every instance in which he has auscultated anæmic patients, Dr. Hutchinson believes it is a characteristic of some importance in the differential diagnosis of anæmic from organic murmurs.—Boston Medical and Surgical Journal, and Medical Press and Circular, October 16.

Functional Dyspepsia—Brown-Sequard's Plan of Treating.—The

plan, as stated in the above case, consists in giving but very little of solid or fluid flood, or any kind of drink, at a time, and to give these things at regular intervals of from ten to twenty or thirty minutes. All sorts of food may be taken in that way, but during the short period when such a trial is made, it is obvious that the fancies of patients are to be laid aside, and that nourishing food, such as roasted or broiled meat, and especially beef and mutton, eggs, well-baked bread, and milk, with butter and cheese, and a very moderate quantity of vegetables and fruit, ought to constitute the dietary of the patients we try to relieve. This plan should be pursued two or three weeks, after which the patient should gradually return to the ordinary system of eating three times a day.—Archives of Scientific and Practical Medicine January, 1873.

SURGERY.

The Capillary Aspirator.—From various sources we have accounts of experimental operations with the instrument. We condense the following from the *American Journal Medical Sciences*, as obtained from a contribution of M. Léon Labbé, surgeon to the Hospital la Pitié, to the practitioners, and from New York journals. M. Labbé relates six cases of operation for emptying the distended bladders and draws the following conclusions:

"1. That capillary hypogastric puncture is a perfectly harmless operation.

"2. That in all cases it must be substituted for ordinary hypogastric puncture.

"3. That in a great number of cases it may, when only once practised, allow the surgeon to penetrate afterwards into the bladder through the natural passages.

"4. That in certain cases where catheterism is impossible, it may be performed three or four times a day without any injurious effect, and thus permit the surgeon to gain time and restore the natural passages; and at the very least it constitutes a palliative means of the highest importance."

Dr. Dieulafoy gives ten cases of retention successfully treated by the aspirator. Fifty-six punctures were made without bad results. In one subject, seventy-two years old, twenty-three aspirations were practiced in eight days.

The same operator reports the use of the instrument in scrofulous abscess of the neck, large hygroma of the knee, and hemorrhagic pleurisy.

Dr. Watcher, of Ernstein, withdrew half an ounce of sanguinolent fluid of fæcal odour from a strangulated crural hernia; patient was relieved and returned to her work.

Dr. Chauveau, in two cases of strangulated hernia, withdrew

colored liquid and a certain amount of gas from intestine; reduction by the toxis followed, and rapid cures resulted.

M. Dieulafoy operated sixty-five times in nineteen cases of dropsy of the knee, withdrawing fluids at times of a bloody and purulent character; no ill consequences ensued.

Dr. Chairou punctured the pericardium and drew off a large quantity of sero-sanguinolent fluid. No accident followed, and next day the patient was moving about the passages of the hospital.

M. Dubrueilh, in case of fracture of potella, with bloody effusion into the joint, twice failed to remove the fluid with the aspirator. Purulent arthrites followed, and a fatal result was anticipated. Dr. Dieulafoy never resorts to the practice in bloody effusion with fracture. In the discussion upon this subject at the Surgical Society of Paris, many of the ablest surgeons expressed the opinion that the use of the aspirator should be proscribed, except for special indications, and when absolutely required. Dr. James I. Little, in a case of enlarged prostrate, punctured the bladder fourteen times.

Dr. H. K. Clarke, of Geneva, in a similar case, made six or seven punctures with a trocar and canula, *one-twelfth* of an inch in *diameter*. No unpleasant effect followed these operations.

Mercurial Treatment of Syphilis. A discussion took place at the Medical Congress of Lyons, at the end of September last, which, from the importance of the subject, the competence of the speakers, and the exclusively practical nature of the arguments advanced, is worthy of attention. The Congress of Lyons shows that syphilographers are divided into three classes—the mercurialists, the non-mercurialists, and the eclectics. Amongst the first were included MM. de Méric, Pacchiotti, Clerc, Drou and Rodet; amongst the second, MM. Armand Després and Drysdale; and amongst the third, MM. Diday, Gailleton, and Clément. Experience, it was argued by M. Clément, teaches us that if mercury does not attack syphilis, it at least affects its manifestations to an extent indeed that it may be said to abolish its effects, so that a syphilitic man may procreate perfectly healthy children. To this view many of the speakers were inclined, but considerable difference of opinion existed as to whether mercury should be given to a man who had simply a chancre. M. Diday adduced 74 observations directed to this point. Of these, 25 had been at once submitted to mercurial treatment, whilst 49 only had general treatment during the primary period. Amongst the 25, secondary affections appeared on the average forty-nine days after the appearance of the chancre; whilst in the 49, secondary affections appeared forty-three days after the *début* of the chancre, that is to say, six days sooner than the others. The effect of the mercury would therefore appear to be very slight on the secondary action of syphilis. M. Diday, however, further found that in the patients

non-mercurialised at the outset, slight secondaries occurred in 34 per cent., and severe in 10 per cent.; whilst in those who had taken mercury during the period of chancre the ratio of slight cases was only 34 per cent., and of severe 20 per cent. M. Diday concludes that the intensity of syphilis depends less on the treatment adopted at the outset than upon the consititution of the patient and the extent to which the general principles of hygiene have been observed. M. Clerc, who is a strong mercurialist, pointed out various circumstances that in his opinion explain the want of success frequently met with in the use of this remedy. First, it is given in insufficient doses; there is nothing to fear in producing slight stomatitis. Secondly, there are often defects in the mode of administration. Thirdly, hygienic conditions are often neglected; insufficient exercise, the abuse of wine and tobacco, debauchery, often oviate the good effects of a mercurial course. M. Clerc commences the administration of mercury as soon as the chancre appears, because from this date the system is effected. He does not believe or anticipate that it will arrest its development entirely, but he thinks it exerts a material influence in retarding their appearance and reducing their violence. M. Gailleton, a partisan like M. Diday, of the doctrine of *poussées successives obligatoires*, or of successive developments and extensions of the disease, employs the mercury only when secondary symptoms have manifested themselves; there he thinks it stops. M. Rodet (of Lyons) commences the use of mercury at once after the chancre has made its appearance; he pushes the remedy vigorously, and changes the preparation frequently, to get a speedier and more prolonged action. Commencing generally with the bichloride in increasing doses, he exchanges it for a time after the protoidide, and finally, gradually diminishing the quantity of this, replaces it with iodide of potassium. M. Pacchiotti thought that mercurial frictions had been too much neglected; whilst M. Drou alluded to the employment of the method of subcutaneous injections, which he was of opinion might sometimes be advantageously employed instead of other plans.—The Practitioner, January, 1873, as taken from the Journal de Médecine, Chillou and Lucas-Championière, November, 1872.

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Venereal Affections—Syphilis.—The law of syphilis is the same as that of small-pox, cow-pox, or measles, a man cannot have a fresh attack so long as the disease remains in the constitution. For instance, after indurated chancres and the appearance of secondary symptoms, it is not possible for the patient to contract a new indurated chancre, with swelling of the glands, manifestation of skin disease, and so on. If, perchance, something of the kind takes place the symptoms do not follow the regular evolution. (M. Ricord, p. 212.

As soon as we have ascertained that there is a hardened chancre

with swelling of the glands—not inflammatory, because the glands in this case never suppurate—the mercurial treatment should be begun at once. If this treatment is soon begun and well carried through, the bursting out of the first secondary symptoms, the roseola, the swelling of the glands of the neck, etc., may be prevented. If this is not frequently the case it is because the treatment is resorted to too late, when the disease has had time to take hold. In such cases, if the treatment is steadily pursued, the secondary symptoms, if they have shown themselves, soon disappear. It is, however, necessary to continue the treatment in some cases five or six months, having regard at the same time to sustaining the system in general. If this is done, there are very few cases of relapse. If no symptoms have reappeared after six months of mercurial treatment, the treatment with iodine should be begun and continued for five or six months more. The proto-iodide of mercury is the best mercurial preparation in use.—M. Ricord, p. 213, Epitomy in Braithwaite's Retrosp., January, 1873.

Treatment of Traumatic Erysipelas.—M. WILDE, in the *Deutsche Archiv f. Klin Med.*, 1872, states that, in a number of cases of erysipelas from wounds, he has seen much good to result from subcutaneous injection of sulpho-carbolate of soda. It was injected daily, at three or four points, along the edge of those portions of skin over which the erysipelas extends, by means of a *Pravaz's* syringe, with an occasional use of a solution—1 : 12—of the amorphous salts. By this treatment he has known the erysipelas to disappear entirely in three, or at the furthest four, days.—American Journal Medical Sciences, January, 1873, as taken from the Centralblatt f. d. Med. Wissenschaften, No. 32, 1872.

MIDWIFERY AND GYNÆCOLOGY.

Dr. J. Marion Sims' Proposed Method of Lessening the Mortality of Ovariotomy.—What I propose, then, is simply this: to puncture the *cul-de-sac* of the vagina behind the cervix uteri, and to pass a tube of some sort into the peritoneal cavity to drain off any effusion that may take place in said cavity. I propose to do it in every instance, whether there are adhesions or not. Patients may and do die of septicæmia after ovariotomy, where there are no adhesions. Hence it is safe to make this puncture in every case, whether simple or complicated. If in three or four days we see that there is no necessity for this precautionary step in the operation, we have nothing to do but to remove the tube, and in twenty-four hours the little puncture closes up spontaneously. Where is the harm, then, of making the puncture? It adds nothing, not the prick of a pin, to the danger of ovariotomy. It cannot, possibly,

do the least harm, and it may be the means of saving life. It may be said that it is time enough to make the puncture when bad symptoms arise. But we know that many cases go on very well for two or three days, when, all at once, there is an explosion as it were; the pulse suddenly jumps from 100 to 120, and then to 140, with vomiting, tympanites, hot skin, and oppressed breathing; the pulse gets quicker and more feeble, and the patient sinks exhausted in sixty or seventy hours after operation. We are in doubt what else to do but to give stimulants; and it is too late to be operating in the dark on a dying patient's vaginal *cul-de-sac*. During the ovariotomy it would have been nothing to puncture it, but now it becomes a difficult thing to do, and we naturally shrink from tormenting one in such extreme agony and prostration, unless we should feel sure of finding the cause of the evil, and of warding off the dangers of the moment. But in my own mind I am sure of what generates these alarming and too often dangerous symptoms, and I beg to urge upon my brethren, with all the earnestness of a deep-settled conviction, the propriety, the necessity, the safety, and the efficiency of resorting to this drainage by the vagina in every case of ovariotomy, both as a preventive and curative agent against septicæmia, which, I am sure, is the great danger in this formidable operation.—New York Medical Journal, December, 1872.

Simon on the Manual Rectal Palpation of the Pelvis and Abdominal Organs. Dr. GUSTAV SIMON (in Göschen's Deutscher Klinik, No. 46, 1872, as also in Arch. für Klin. Chir., vol. xv.,) describes his method of exploring the pelvis. The patient is placed on the back, either in the lithotomy or ordinary obstetric position; chloroform to complete insensibility is given; and then first two, and subsequently three and four fingers, are passed gradually in by a rotary movement. Bimanual manipulation is enjoined, the other hand being pressed over the abdomen. Tearing of the sphincter seldom occurs if care be taken, and the operator's hand be not too large; some temporary, but no permanent inconvenience may follow.

The examination is useful for all cases of disease of the pelvic organs, especially the uterus, ovaries, and broad ligaments, and of the bladder (in men,) as also for tumors in the lower half of the abdomen. In midwifery, it is likely to prove very useful. The first cases examined were vaginal fistula, cancer, ovarian tumor, and fibro-myoma of the uterus. No incontinence whatever ensued, the explorations being repeated three to five times.—Boston Medical and Surgical Journal, March, 1873, from The London Medical Record.

EDITORIAL AND MISCELLANEOUS.

Notice to Subscribers.

SUBSCRIBERS will please forward the amount due for subscription (by postoffice order or by registered letter) immediately upon the receipt of this number, in accordance with our terms. Receipts will be furnished with the next issue.

Price of Subscription.

THIS has been fixed at a low rate, so as to put the *Journal* within the reach of all. At or before the end of the year we shall probably increase the size of the *Journal*, as well as the frequency of the issue.

Original Articles.

WE have been compelled to admit so much original matter into this our first issue, that the Abstracts and Translations from domestic and foreign periodicals are necessarily meagre. As it is, several valuable papers had to be reserved for our next number.

South Carolina Medical Association.

THE annual meeting of this Association, as will be seen from the advertisement in our columns, will meet in this city at the Roper Hospital, Tuesday, April 8th. Delegates, we understand, will be sent from several county societies, recently organized, and we look for a large representation from every portion of the State. Several important reports are expected to come up for discussion, and we trust that the meeting will be as large and pleasant a one as that which we attended last year in Columbia.

American Medical Association.

THE annual meeting will be held in St. Louis on Wednesday, 6th May. Secretaries of organizations, appointing delegates, are requested to forward the names to Dr. Wm. B. Atkinson, of Philadelphia, the permanent Secretary. Papers to be read, must be forwarded to the Secretaries of the appropriate sections at least one month before the meeting, or they will not secure consideration.

The American Public Health Association

WILL meet on the 1st of May at Cincinnati, Ohio, Stephen

Smith, M. D., President; Elisha Harris, M. D., Secretary. A large number of reports on subjects of great general importance and interest will be presented.

Medical College of the State of South Carolina.

THIS institution closed a very successful session early in March. The Faculty have every reason to be highly gratified with the results of their efforts during the past years. After a severe struggle with the numerous obstacles developed by the unfortunate condition of our Southern country, the school has been re-established upon a secure basis. The scheme of a gratuitous course of instruction, forced upon the institution by the exigencies of the times, and considered only a temporary necessity, has worked well, and will be continued the coming session. The general intelligence of the late class was fully up to the usual average, and the standing of the graduates was more than encouraging. The cordial support and hearty approval given to the faculty by members of the profession in this and adjoining States we know is fully appreciated, and must exercise a potent influence upon the welfare of this time-honored and once popular school.

Resignation of Dr. Darby.

THE *Medical News and Library* for February, under the caption "Medical College of the State of South Carolina," announces the election of Dr. R. W. Gibbes, of Columbia, to the chair of Anatomy and Surgery, made vacant by the resignation of Dr. John T. Darby. We deem it important to correct this mistake. The changes referred to effect the Medical Department of the University of South Carolina, located at Columbia. The error is a strange one on the part of our cotemporary, inasmuch as the profession generally have been informed through *Medical Journals* and the friends of Dr. Darby, that his resignation was brought about because of the peculiar status of the University under the *new regime*. The mixed board of trustees, representing simply the political party that at present rules the State, had, it was claimed, by their action, prejudiced the interests of the institution, and promised further to damage it. Dr. Darby met the question practically by resigning.

Dr. S. S. Satchwell.

Dr. S. S. Satchwell, one of the most widely known of the physicians of North Carolina, and the author of several able addresses before the Medical Association of that State, has recently delivered an address before the "Alumni Association of the University of the City of New York." The *World*, *Tribune*, and other papers

of New York have referred in very complimentary terms to this as a very successful effort. Dr. S. was honored by a complimentary dinner given to him by the association, at Delmonico's, at which many of the most distinguished physicians of New York City were present. Such events will do much to restore feelings of friendship and cordialty between the lately divided sections.

We hope to be able to present this address to our readers in our July issue.

Vaccine Crusts.

WE have received from Dr. E. Cutler, of Woburn, Mass., vaccine crusts enclosed in metallic and glass cells, by which it is hoped that all deterioration from atmospheric influences will be prevented. After examination we will be enabled to pronounce more fully as to their merit.

Death of Professor H. L. Hodge.

THE entire profession will receive with the deepest sorrow the announcement of the death of this venerable, kind-hearted and eminently distinguished ex-Professor of the University of Pennsylvania. He belonged alike to the North, the South, the East and the West, for his teachings have had their influence in every section of our widespread country. Dr. Hodge was born in Philadelphia, June 27th, 1796. That city has ever been his residence, the field of his labors and of his triumphs. He died of "*Angina Pectoris*" on February 26th, 1873. His works upon "Obstetrics" and upon "Diseases Peculiar to Females" are everywhere considered authority. He is especially known for his successful efforts in illustrating the practical value of Pessaries in certain uterine conditions, and for his important modification of the Forceps.

Death of Distinguished Physicians.

Mr. H. D. Cardin died on the 22d of September, 1872, of apoplexy. He ranked high as a surgeon and operator; is said to have introduced the operation by the "single flap," which is now so popular a method of amputation.

Mr. James Sartin, F. R. C. S., died Dec. 24th, 1872. He was well known in connection with skin diseases, and as having introduced glycerine into medical use.

M. Dubois (d'Amiens), perpetual Secretary of the Academy of Medicine, died January 10th, 1873, from effects of cerebral hemorrhage.

M. Huguier, formerly surgeon to the Hôpital Beaujon, and distinguished also as an obstetrician, died January 13th, 1873, from cancer of the jaw.

Mr. J. Baker Brown, one of the early and successful ovariotomists, and author of the work on "Surgical Diseases of Women," died February 3d, 1873. Once in the enjoyment of the highest reputation, and with every promise of increasing fortune, he, through a sad professional mistake, came to grief, and from disappointed hopes and blasted fortune, he was never able to recover. Successive attacks of paralysis had long rendered him helpless, and made death a happy relief.

Dr. Warren Stone, Professor of Surgery in the University of Louisiana, at New Orleans, died December 6, 1872, aged 65 years. He had as wide a reputation as a practical surgeon and physician as any one in the Southern country.

Dr. D. H. Trezevant, of Columbia, S. C., died March, 1873. He was one of the oldest practitioners in the State, and a man of decided character and large reputation. He was loved by a large circle, and marked as a man of spotless integrity.

Advertisements.

ADVERTISEMENTS, belonging exclusively to the business department of the *Journal*, the editors, though the publishers, will not be responsible for the matter they contain.

BOOKS, PERIODICALS AND EXCHANGES RECEIVED.

Science and Art of Surgery. By John Eric Erichsen. A new edition, enlarged and carefully revised by the author. Illustrated by 700 engravings on wood. Henry C. Lea, Philadelphia. [This new and elegant edition, in 2 vols. of 1700 pages, is just received through Mr. Fogartie.]

Diseases of the Urinary Organs, including Stricture of the Urethra, Affections of the Prostate, and Stone in the Bladder. By J. W. S. Gouley, M. D., Professor of Clinical Surgery in Medical Department City of New York, Surgeon to Bellevue Hospital, etc. With 103 wood engravings. Wm. Wood & Co., New York. 1873. [From the publishers.]

A Hand-Book of Post-Mortem Examinations and of Morbid Anatomy. By Francis Delafield, M. D., Curator to Bellevue Hospital, etc. Wm. Wood & Co. 1872. [From the publishers.]

Bulletin Bibliographique. Bossange's Monthly Abridged List of New Works published in France. [From Gustave Bossange, 16 Rue du Quatre, Septembre, Paris. January and February, 1873.]

Report of the Board of Health of the City of Chicago. By J. H. Rauch, M. D., Superintendent.

Doctor in Medicine, and Other Papers on Professional Subjects. By Dr. Stephen Smith. Wm. Wood & Co., New York. [From the author.]

Letters from the Secretary of War, communicating information in relation to Quarantine on the Southern and Gulf Coasts.

An Essay on the Climate and Fevers on the Southwestern, South Atlantic and Gulf States. By Dr. James C. Harris, of Wetumpka, Ala.

Nouvelles Études sur le Choléra Asiatique, Rome, Italy. By Dr. Socrate Cadet.

New Method of Preserving Tumors and certain Urinary Deposits during Transportation. By Joseph E. Richardson, M. D., Philadelphia. [From the author.]

Sheppard & Dudley's Descriptive Catalogue of Apparatus for Deformities, etc. New York.

Transactions of Medical Society of the State of West Virginia.

Annual Report of Trustees of Mississippi State Lunatic Asylum for 1872.

Report of Manhattan Eye and Ear Hospital.

Transactions of the Medical Society of Pennsylvania. Its twenty-third Annual Session, January, 1872.

American Journal of the Medical Sciences. Philadelphia, January, 1873.

Nashville Journal of Medicine and Surgery. January and February.

The Half-Yearly Abstract of the Medical Sciences. January, 1873. Philadelphia.

Medical News and Library. January, February and March. Philadelphia.

Medical and Surgical Reporter. Philadelphia. January, February and March.

Cincinnati Lancet and Observer, March.

Medical Record, New York, January, February and March.

St. Louis Medical and Surgical Journal, March, 1872.

Boston Medical and Surgical Journal, March, 1873.

Pacific Medical and Surgical Journal, January, February and March, 1873.

Canada Medical and Surgical Journal, November and December, 1872; January and February, 1873.

Boston Journal of Chemistry.

Journal of Applied Chemistry. New York.

The Journal of Materia Medica. Tilden & Co., New York.

ERRATA.—In the hurry of getting up this issue to be published by the first of the month, as promised, some of the articles got to press before they were critically noticed; we therefore beg our readers to make the following corrections:

In THE CAPILLARY ASPIRATOR, page 78, read, on 5th line, HOPITAL la Pitie to the PRACTITIONER, for "Hospital la Pitie to the practitioners," and on 7th line, same paragraph, distended BLADDER for "distended bladders." In 7th paragraph, after knee, read, and IN hermorrhagic pleurisy. In following paragraph, 1st and 2d lines, read for "sanguinolent," SANGUINO-PURULENT. In the next paragraph, 3d line, read, TAXIS for "toxis." In 12th paragraph, 1st line, for "potella," read, PATELLA; and in 3d line, same paragraph, read, ARTHRITIS for "arthrites."

MEDICAL COLLEGE

OF THE

State of South Carolina.

The Forty-fifth Course of Lectures in this Institution will commence on the FIFTEENTH OF OCTOBER, 1873, and terminate early in March following. The Clinical advantages of the School will be greatly enhanced, as the Roper Hospital is now undergoing thorough renovation, and, together with the present City Hospital building, will constitute a field for observation of disease not found in any Southern city, excepting New Orleans. The Faculty of the College are consulting officers of the Hospitals.

EXPENSES OF THE SCHOOL.

Matriculation Fee	$20
Demonstrator's Ticket	10
Graduation Fee	30

For further information, address

R. A. KINLOCH, M. D.,
Dean of the Faculty.

South Carolina Medical Association.

THE ANNUAL MEETING OF THE SOUTH CAROLINA MEDICAL ASSOCIATION for 1873 will be held at the Roper Hospital, Charleston, on the SECOND TUESDAY (8th) of April. Where no County Society is organized, the Physicians will send Delegates. Arrangements will be made with the Rail Roads to pass Members and Delegates for one fare.

T. GRANGE SIMONS, M. D.,
Recording Secretary, S. C. M. A.

DR. DARBY

Having resigned the chair of Anatomy and Surgery in the University of South Carolina, proposes to receive OFFICE STUDENTS, and to give practical instruction on special subjects to graduates of medicine. The system of instruction to Office Students will be conducted by Examinations, Lectures and Demonstrations; the courses to graduate on the EYE AND EAR, THE LUNGS AND HEART, and THE GENITO-URINARY ORGANS OF THE MALE AND FEMALE WILL BE MADE ESSENTIALLY PRACTICAL.

The Special Courses will begin on July 1st and cover three months each.
Office Students can be entered at any period of the year.
For further information address

DR. DARBY, at Columbia, S. C.

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THE CHARLESTON

MEDICAL JOURNAL

AND REVIEW.

(NEW SERIES.)

VOL. I.] CHARLESTON, S. C., JULY, 1873. [No. 2.

ART. I.—*Address of* Prof. S. S. SATCHWELL, of Wilmington, North Carolina, *before the Alumni Association of the "University Medical College," New York. Delivered by invitation, March 4th*, 1873.

MR. PRESIDENT AND FELLOW ALUMNI OF THE UNIVERSITY MEDICAL COLLEGE: It is good for us to be here. An old family custom, hallowed by tradition, still prevails in some parts of our Southern country of calling together once a year, all the members, however widely apart, for the purpose of reviewing the past and of consulting upon the future. The occasions are held sacred to expressions of honor and gratitude to parents—to the consideration of plans and prospects of the future—to the indulgence anew of professions of mutual kindness and attachment—to the recalling of old incidents, and associations, and fond recollections of the old household, and of treasuring the memory of those who, separated by time, distance or death, are unable to meet with the other members of the family circle around the old domestic hearth. At these times, the relatives who are possessed of common gratitude for the old homestead of their fathers, and who have cultivated those feelings which cluster around the heart of every true son, regard it as a duty and pleasure to attend if possible, otherwise to send to those present, greetings of good will and common interest. The custom sanctifies a valued principle of human life and happiness. Rising superior to the conflicts of interest and passion, and uncontaminated by the corrosions of time, the various members remain cemented by holy and enduring ties, and a constant in-

fluence is at work to reanimate and perpetuate the best feelings of our nature.

With similar enobling principles of human action and affection, a few leading and devoted sons of our *Alma Mater* met together in this city, a few years ago, and formed this Association. And now, upon the sixth occasion of its annual re-union, and actuated by the same laudable motives, we have come together to renew our expressions of gratitude to our own bountiful mother—to show that we are tenderly alive to those affectionate reminiscencies and endearing associations, interwoven with the halcyon days of our medical pupilage here—that mutual kindness is still the tenant of our bosoms—that no competition, nor selfish aim, nor any of life's busy toils and anxious cares, have made impressions upon us, inconsistent with the duties of friendship, the pursuit of science, or with the instincts of brotherly love and filial duty and affection. It is meet these annual meetings should be held, that these cherished sentiments may be uttered one to another, and that we may take council together upon those interests of the Associatiou, our *Alma Mater*, and Profession, in which we are all concerned.

This is common ground, where we all can meet and testify to the world that we belong to a profession which ignores all distinctions of condition, section, climate, country and race—that in our noble mission of science and humanity we soar above the contentions of parties and creeds—the strifes of section—the convulsions of war—and that its domain is too extensive even to be circumscribed by the coarse boundaries of nationality. It is our proud heritage to recognize, not as an impulse but as an established and hallowed principle, the high duty of every practitioner of our noble calling, to bear this spirit at all times in his heart and daily practice, else he forfeits the right accorded him in his diploma, and violates the honor and requirements of the profession. No man is entitled to its rewards or is worthy to cross the threshold of its domain who, wherever he may reside or whatever his politics or religion, has any boundary lines to pass in the discharge of the high responsibilities pertaining to its pursuits.

In coming, therefore, from my own beloved home in the sunny South to tender you, as I now do, my cordial greetings, and to take gratefully once more the hands of the three yet remaining members of the Faculty, who here equipped and armed me for medical service and bid me go forth valiantly to battle with the enemies of health and life, I need scarcely say that *I have had no chasm to cross.* My declarations, here upon Northern soil and before this large assembly of ladies and gentlemen, that my ardent love of my dear native section was bred in the bone and nourished in my blood—that it has grown with my growth and strengthened with my strength—that in the late mighty struggle of the South for independence I was in the Confederate armies throughout, doing all in my power for the success of the Southern cause—that

since the surrender of our great military chieftain at Appomatox, the poverty and unnumbered woes of our people have increased my sympathies for and devotion to them, are expressions of motives and conduct consistent, I trust, with another truth—that from the time of our failure I have been independent and outspoken in favor of those measures of peace and reconciliation, sacrifice and patriotism, which, rising above the passions of war and the exactions of drilled parties, are most conducive to the welfare, prosperity and happiness of the *whole American people, and to the honor of the nation.* With such grounds of occupation, past and present, my position as your speaker on this occasion is at the same time not free from embarrassment. Conscious of my inability to bring with me any tribute that would benefit the occasion—preceded by those distinguished in the annals of medicine, and who, by their learning, genius and eloquence have made these occasions interesting and profitable, I can but feel impressed with my deficiencies for the task which your generous partiality, rather than your good judgment in choosing, has assigned me. There is another reason why my acceptance of your invitation may be rashness. In no pursuit of our impoverished Southern land is the blight of war more manifest than in our own profession. This is seen not alone in the stinted pecuniary rewards for active service, but in the more than ever exacting duties, and consuming energies, which prey upon the physician, robbing him to no little extent of that domestic enjoyment which, to the wise man, is the main pleasure of life, and leaving him still less time for current medical reading, and for those severer studies, and investigations, demanded of him, who would not lag behind, or be jostled aside, by the progress of our always advancing science and art. To this common demand of necessity I am no exception. But although I had nothing more to bring than solely to attest my sense of obligation to my *Alma Mater*, and my deep interest in the objects of this Association, I am somewhat consoled by the hope, that this alone will blunt the sharp edge of criticism, and that the sincerity of the offering, however feeble, will in some degree conciliate the kind indulgence of those, who rarely refuse due credit to good intentions.

He who has been absent over a score of years from the scenes of his youth, where a nourishing mother watched with tender care his infantile developments, and guided his footsteps up the rugged steeps of knowledge, cannot revisit them, without mingled emotions of pleasure and sadness. He brings with him his own experience, in attestation of the truth, inscribed on every page of the history of human life, that every pleasure has its pain, every rose its thorn. Such are the involuntary reflections which steal over me as, after a similar absence upon life's tempestuous ocean, I return, like the storm-tossed mariner, to revisit the scenes of my medical boyhood here. As I view with amazement, the variety and greatness of the changes, in hospitals and medical colleges, which have

occurred in this city of wondrous developement and growth; and scan with becoming interest, the new garb which decorates nearly everything pertaining to the University. I am nevertheless carried involuntarily to the dear old number, six hundred and fifty-nine (659) Broadway—the hallowed home in my student days, of our *Alma Mater*. I linger with irrepressible emotion upon the old site, changed though it is, where stood the fine structure owned then by the Faculty, and surpassed at the time by few finer buildings in the city. It was there that able and devoted medical men, had but a short time previously, organized a medical college unsurpassed, perhaps unequalled, in the whole Union for its comforts, appliances, and attractions, in the way of zeal, attainments, high character, eloquence and hard work of its distinguished professors. Professors John Revere, Gunning S. Bedford, Granville S. Pattison, William Darling, Martyn Paine, Valentine Mott and John W. Draper, constituted the brilliant array of teachers who then guided the destinies of the University Medical College, and of whom every *alumnus* can be justly proud. It is there, as the old haunts of earlier days are impressed upon us, that the avenues of memory, strewn with the incidents and associations of the past, partaking, as they did, of the varying hues of disappointment and hope, friendship and toil. The retrospection stirs another unpleasant reflection. It is that feeling of condemnation for opportunities neglected—that reproach of conscience for hours spent in idleness, of days passed in giddy pleasures, rather than in the purer delights, and enduring prizes of scientific advancement, which arises unbidden against us. We listen in vain, as we stand around these once familiar places, for those voices of friendship and eloquence, which welcomed us to halls of learning, and infused into our minds new awakenings of love of knowledge, and of professional ambition. Where now, have gone the prolonged vibrations from the harsh sounds of that memorable old gong, that with so much regularity summoned us from Professor to Professor and from Lecture Room to Hospital or recreation? Where are the friends of my earlier days here—where the familiar faces of those who sat with us session after session in Lecture Rooms, joined in dissection, went with us to Anatomy, or through hospital wards, or united in the genial chat or merry laugh, as we walked these crowded avenues, or repaired to our rooms for review and study? Unrolled are the names to many of them. I am rejoiced to know, high upon the scrolls of medical fame and success with reputations still increasing, with restlessness yet extending. With fine attainments, superior minds, and courageous hearts they apply themselves laboriously and constantly to the high duties of their calling, and some of them have risen to high distinction—ornaments of the University, and filling new chairs in the profession. A few of them from Northern climes, I met upon Southern soil, during the stormy days of war, when, as surgeons, we were engaged in common duty in our respective sick

and wounded. The fiery passions which then so much estranged others, had no power to prevent us from meeting as old friends. As the noise of roaring artillery, and the clash of resounding arms, were still reverberating around us, and after finishing our paramount duties to our disabled and dying, we considered it to be no want of fidelity to our respective commands, to get together and smoke the pipe of peace, over a rehearsal of New York reminiscences, and of former associations and friendships. Thus it was, that amid the fierce bitterness of those terrific days, we renewed the enduring friendships of "Auld Lang Syne," and illustrated the principles and instincts of our profession, that it is one of peace and good will, and of liberal views and genuine manhood.

Others of my classmates, genial, brilliant, full of promise, have failed to realize early expectations. They have either been unwilling to undergo, that protracted labor, and discipline of patience, and duty required of all who obtain gennine reputation and honorable success in medicine; or, dissatisfied with its small pecuniary rewards and necessary sacrifices, have given it up for the better pay and brighter prospects of other pursuits, and borne along by success, have been carried away from us far upon the broad ocean of life.

Others are found here and there, graduates with me and of other medical classes and schools, who, with perverted feelings and obliquity of moral principle, engrafted upon low desires and groveling purposes, have either fallen into the sloughs of open empiricism, or, yielding to some other gross and debasing principle of human nature, have brought disgrace upon legitimate medicine, and dishonor upon themselves. The traditions and instincts of the profession, unite with the ordinary claims of justice, in demanding a more severe condemnation, and ostracism, of such apostates, than of the most blatant quacks of any of the irregular systems of the day.

But in thus running over the list of the living, how sad the reflection, as we see rising before us the images of so many of our dead companions, proclaiming the busy hand of the "insatiate archer," and the truth that the most shining marks have been his victims! On the canvass of memory are protrayed, in vivid colors, the bright eyes, gushing friendship, shining intellects and high-souled honor of those devoted friends of truth, knowledge, and the profession, who, with armor on, and beacon lights above the common horizon of their calling, died too soon for the cause of medical science, and the good of humanity.

Among my earliest impressions of New York, none are more impressive and lasting than the recollection of my entrance, and first week's attendance upon Medical Lectures in this city. In my own case, they are stronger from the well known law of contrast. Reared in the rustic seclusion, of the country life of Eastern North Carolina, I was an entire stranger to the noise and excitements of a great metropolis. I was almost bewildered, as I threaded my way through the labyrinthian mazes of novelty, bustle, and moving masses of

humanity everywhere, around and about me. It is the natural feeling of the young and inexperienced stranger, as he first passes from the quiet of the country to the stir of the city. But this perplexing influence of big sights and thrilling novelties, is of short duration. Soon they give way to new awakenings of thoughts, aspirations and aims, that will give new energies to his limbs, increase liberality and philosophy to his sentiments, and more success to his efforts, if he is a true and worthy man. Thus it was that, animated by a home-made resolution, to find the best Medical College in the whole country, I made my way through all embarrassments and over all difficulties to the aforesaid earliest home of our beloved Alma Mater. There I found at once that magnetism of cordial welcome, open arms, and God-speed in my studies which eradicated all home-sickness, fired me with new life, and bid me feel that I was at home, surrounded by warm hearts and true friends. It was a legitimate exhibition of that high purpose, public spirit, and indomitable determination, of that able and devoted Medical Faculty, to build up in New York a great national school of unrivaled advantages and usefulness. They did not fail in their great work, but achieved the most abundant success. This Association affords practical, and most gratifying evidences of its fruits.

It was then, as you are aware, the programme, to assign one hour every day of the first week of the regular term of fall and winter lectures, to each Professor, for an introductory lecture, and no other lecture was delivered that day. Let us pass briefly in review, the Faculty as they then appeared to me in the lecture room, during this week of their formal introduction to the class, to undergo criticism and to exalt each one his own chair and foreshadow the general course he should pursue in his lectures. In so doing, I propose to utter no expression or word of commendation from mere impulse of grateful friendship, but to speak from facts, and the voice of the profession, which, after all, is the best judge of its members.

First came the old man eloquent—Dr. Pattison—with his graceful bearing, earnest manner, lisping voice, and ardent love for medical students which always marked him, and in return secured their strong attachment. As a lecturer on anatomy, he almost made the dead body before him speak, as with his own peculiar eloquence, he gave a masterly exposition of the importance of anatomical knowledge, as the only avenue to success and distinction—the foundation of all reliable information in medicine and surgery—the hope of progress in the future, as it has been in the past. His glowing powers of description and analysis, as he delineated the structures, and regions, of the most importance in their bearings upon relative anatomy and surgical operations—his success in fortifying the student in the knowledge as well as with faith and boldness to *cut freely* when indicated—to *make free and bold incision*—made him one of the most successful, as well as attractive lecturers

that ever adorned a medical college. His capacity thus to seize upon the strong points of his subject, and to hold his classes spell-bound, gave them such a practical familiarity with relative as well as general anatomy, that it told greatly for their good in their future course as practitioners of medicine and surgery. No stranger could be long in finding out that Dr. Pattison was born to lead and not to follow. His originality, self-reliance, large brain, and brave, generous heart, qualified him to be a pioneer—to found and sustain medical schools—to inaugurate great movements, and to give them success. Men thus endowed, and of course, superior to the great mass around them, always excite opposition and make enemies, and of course he had his. But the same qualities enabled him to draw around him strong-minded and courageous co workers, and troops of friends, who were true, strong and lasting. Now that he is beyond the reach of calumny or praise, let us all who so devotedly and persistently loved and honored him in life, embalm him yet more sacredly in our memories, and protect and perpetuate his fame.

Scarce had subsided the applause following the impressive lecture of this gifted man, before we were seized by our devoted private teacher, Dr. Darling, and borne away to that paradise of his—the Dissecting Room. Here he piled Pelion upon Ossa, in arguments to show that, while Dr. Pattison was correct in all he had said, *it was by our own dissections alone, amid all the louthesomeness of the Dissecting Room*, we could pass that threshold of success in practice alluded to by the great master who had just spoken. With a fondness, and presistent enthusiasm for anatomy, I have never known equaled, many years of his useful and laborious life have been devoted to the preparation of the thousands of good anatomists he has turned out upon the country. He has justly earned the reputation of an able, popular, and effective lecturer; and as an anatomist, minute, thorough, profound, and progressive, has not an equal, it is believed, on the American Continent, and no superior on the other side of the Atlantic, in the opinion of those better informed than myself. With the love and practice of continuous hard labor and the go-ahead character of a true American, he unites the solid, granite-like, qualities of a genuine Scotchman. He has made for himself an illumined pathway, that leads through a successful examination and endorsement of the Royal College of Physicians and Surgeons of London, and has been repeatedly thanked by the distinguished Henry Gray of the same College, and lecturer on anatomy at the St. George Hospital Medical School, for the detection of errors in his famous book, pointed out by Dr. Darling, and corrected in subsequent editions. He has the admirable skill of making contagious to his admiring classes his own anatomical devotion, not surpassed by that of Bichat, Beclard, or Godman; and while he everywhere enjoys the confidence of the profession he most worthily and acceptably fills that important chair in the Uni-

versity, so well graced and adorned by the lamented Pattison. He has found time, amid all his anatomical labors, to become accomplished in all the collateral branches of his profession, as well as in general science, art, literature, and knowledge. In addition to these general accomplishments and great learning, he reads and speaks the ancient and modern languages, with almost the fluency and ease he does our own, and is one of the best classical and belles-lettres scholars in the whole country.

Next lay name Dr. Mott, then, and to the lay of his death, the recognized Napoleon of American Surgery, and unsurpassed, the world over, as a bold and successful operator. He was no less eminent in those rare powers of discrimination and intuition in the diagnosis and treatment of many diseases, which gave him distinguished success in medicine as well as surgery. His commanding appearance, lofty dignity and countenance beaming with animation and benevolence, inspired not alone respect, but almost awe as with force he too recommended practical anatomy as an indispensable means of success. He assured his hearers that if he had attained any distinction in surgery it was by his familiarity with relative anatomy, attained by a full dissection himself, kept up for a long series of years, and even then repeated as often as any operation to be performed did not open a clear and bloodless way to its seat. It was by these means he had achieved his proudest triumphs, and to that earnest and continuous labor while he always practised as indispensable and that more necessary to success, he principally owed his high fame. His warning voice [illegible] we will often see in terrible and sacrificial [illegible] disappointment and mortification, and in some cases—I will attach a strong emphasis to the [illegible] and the [illegible] as the letter. [illegible]

Professor of Surgery, Billroth, in his excellent book of fifty lectures. It embraces the names of those who were not born to "die out." Their teachings and services follow them, and their memorable deeds and honored names will be immortal. The fact that our own illustrious Mott, was the first surgeon in the world, to perform the operation of removing the lower jaw, at the temporo-maxillary articulation for osteo-sarcoma, his early excision of the clavicle for the same disease in the person of a clergyman from South Carolina—the fearlessness and success with which he arrested the blood of arteries, before deemed fatal to tie—his satisfactory demonstration of the possibility of tying the *arteria innominata*—are only *some* of the exploits which will never allow *his* name and fame to "die out," or *his* services to be blotted from immortal scrolls, so long as there remains an alumnus, of the University, to raise his voice and arm in her defence, or a friend of science to cherish its patrons, or an American citizen to feel proud of the achievements of his country.

Next in order appeared the learned and accomplished Professor of Theory and Practice, the lamented Revere. He impressed himself most favorably, as he devoted his hour mainly to an exposition of the grounds upon which he proposed to take us through the labyrinths of disease in all its accidents, subtle guise and open forms. He dwelt with especial emphasis upon the superiority of the inductive system of teaching and practice, over all empirical plans and numerical methods of Louis and others. His high culture, impressive delivery, and fine analytical mind, gave him much weight as he insisted upon following the logical suggestions of the Baconian system, in extracting the gold from the dross of the mass of medical literature, and of testing the means of diagnosis and treatment by the touchstone of facts and reason as presented in the pages of rational medicine. With an elevated sense of justice and of the propensities of medical life, he had a withering scorn, which he did not conceal, for all that was little or unworthy, and never failed to show that our great American medical Code is only another name for gentleman. A bright exemplar himself of courtesy and elevated sentiment and action, he used every proper occasion to impress upon his classes the necessity of giving a high tone to the profession, and of regulating their conduct by the strictest rules of medical ethics. He carried all this even to chivalry, and nobly illustrated in death the true spirit of martyrdom to his profession. Fearless of danger, ever ready to relieve human suffering, he was called upon to treat one of my classmates, a former pupil of his, the genial and talented Dr. Samuel M. Farrar, of Virginia, then one of the attending physicians in one of the New York charities, for the treatment of typhus fever. Dr. Farrar had imbibed the fatal seeds of this disease, and though Dr. Revere knew it, he would not withhold his self-sacrificing devotion to friendship and professional duty, and in this attendance upon his

friend and pupil, imbibed the same disease, which, acting upon a delicate and enfeebled constitution, caused his death. Thus did an act, touching, heroic, sublime in all its relations, make another victim to be added to that vast army of martyrs to be found along the traces of medical history. "He winged the pinion that impelled the steel."

Next day brought before us the eloquent and devoted Bedford, always an active spirit in controlling the affairs of the University. Full of zeal for his favorite chair, which opens up the most tender and important relations of life, he had unusual success in imparting to medical students a like fondness. In fact it may be well doubted whether, as a teacher in his own cherished department, he ever had a superior in this country. His success in riveting the attention of his thronged classes, the enthusiasm he inspired in them for the whole profession, and their subsequent success in the practice of that particular branch, including the diseases of women and children, so ably set forth, not alone in his lectures, but in books and other publications well received and translated into foreign languages, gave him high distinction, and will make his name and fame memorable and illustrious in medical history, and in the annals of the University.

He was a pioneer in the admirable movement of inaugurating a regular system of clinical instruction in his department, as Mott was in that of surgery. For this and other reasons complimentary to Dr. Bedford, the pleasing duty was assigned him to appropriate his hour to a delineation of the great and unequaled advantages of New York over all other American cities for clinical instruction and medical education. With that eloquence and finished oratory so peculiarly his, he did not fail to convince all that he was a Professor, earnest and faithful in instruction, as he was in practice skillful and successful. What this city was *then* in great resources of medical instruction, she has *now* become more numerously and effectively than ever before—in the magnificence and variety of her Cliniques, Dispensaries, and Hospitals—in the number and equipments of her Medical Schools—and in the brilliant array of Instructors, Professors and Clinical Teachers, in every department of the profession. It is simple justice to say that New York stands unrivaled on this Continent in advantages to the medical student, not alone in the variety and extent of her clinical resources of these great charities, but also in the number, abilities, skill, and power of the Teachers and Professors who are attached to her Medical Colleges, Hospitals and other Medical Institutions. The devotion, enterprise, and public spirit of her medical men—the benevolence, generosity, and magnificence of thought, style and action of the brave-hearted and large-minded of the younger members of the profession here, who are so nobly moving onward the column of medical progress the philanthropy of her citizens—and the general spirit of enquiry, devotion and improvement in the profession,

nt such valuable triumphs and success that competition is left
id. It is no more pleasing than astonishing to behold the
ber, size, and resources of these constantly increasing charities,
nstitutions of knowledge, science, art and progress, which at
st every turn now meet the eye in this city of marvellous
th and increase of population. Those influences and advan-
which have made New York the metropolis of American com-
e, enterprize and greatness—the Empire City of the Republic
pulation, and in wealth, industrial art, and material progress,
infused a corresponding life and power into all her Medical
ges, Hospitals, and other charities, and prominent institutions,
organizations, for the promotion of science, education, humani-
nd religion. The reputation so justly sustained by her physi-
and surgeons, whether in private practice, or in public institu-
, bears out the assertion that no student in quest of knowledge,
patient afflicted with any of the infirmities and diseases of
anity, need turn away from New York to go to any other city,
, or nation.

turning from this brief digression, the following day intro-
d to the class our venerable patriarch of the University, our
red and distingushed Dr. Paine. He makes up, with Dr.
ing, and President Draper, the trio of electric links between
past and present of the faculty. Though his handwriting
bles with age, he still has a warm heart for his friends, and a
, good, head to devote to science, and the interests of the col-
in which he has borne such a conspicuous part, and yet loves
ell. As he stepped forward there was something in his ap-
ance, while, with eloquence of speech, earnestness of manner,
exhibition of conscious strength, he set forth the course he
ld pursue in developing the subjects of his Course of Institutes
Materia Medica, which marked him as one of those great
and master-spirits in the profession, who indelibly impress
selves on the age in which they live. He is one of those who
brought medical teaching in New York from its former low
e to its present high position. The genius and learning he al-
exhibited, as with a wand of enchantment he unfolded the
eries of nature and the power of proper aid when thwarted in
lesigns, were only equaled by the fire of his attacks, which
through the hall like the thrilling notes of the dashing war-
when he applied his sharp battle axe of true, vital steel
ast the encroachments of organic chemistry upon his own do-
of vitalism. He stands forth majestically as its acknowl-
d head and champion. He is strong in his writings and teach-
, that the doctrines of the chemical school are subversive of true
iological science, and, therefore, of those pathological and thera-
ical principles upon which rational medicine is founded. Much
is long, and useful life, has been spent in this warfare. His
volumes of medical and physiological Commentaries, with

other elaborate publications and numerous addresses and discourses, including his recent great work of profound research and masterly abilities, together with a laborious service of thirty years in the University, besides other professional engagements and daily duties of importance pressing upon him all his life, have alike excited wonder and admiration everywhere, that any one man could do so much. None but a man of his great system and rigid discipline of life—husbanding his resources of health with the strictest economy, temperance, and wise observance of the laws of human philosophy, could labor so long, so hard, and so well as he has. Intermingled with his strong and beautiful character, is a purity of morality and virtue, and a sustaining Christian piety sufficient to drive hollow-hearted infidelity with her sneers from all our borders. The profession of his own native country have decorated him with the laurels of victory and renown, while the most learned bodies of Europe have tendered him flattering recognition and honors. One of the crowning virtues of his noble life is the moral heroism he exhibits for the right, however much opposed by fickle public sentiment. This was shown in his triumphs at Albany, for science and the University in the anatomical bill, as shown by our talented and rising professional brother, and laborous Secretary, Dr. Charles Juslee Pardee, when, against the almost overwhelming opposition of public feeling, its passage was secured, and bigoted prejudice made to yield to the demands of humanity and intelligence. The statesman wins his triumphs in cabinets and legislative halls, and the warrior his victories on fields of battle, and returns home with bloody shield, but "peace hath her victories no less renowned than war," true heroism is as common to private as to public life, and none of these illustrious men of public life are more deserving, or brave, than this courageous and self-sacrificing friend of science and of his country, our own honored and illustrious Paine, who yet remains to be venerated by his old pupils, and a beacon light to all.

Last, but not least, came the distinguished and noble Draper—the pride of science, the man of progress, the ornament of his country and of his race. With quiet step, and modest mien, and a countenance radiant with benevolence and genius, he captivated the class, as he always did. He proceeded to show that science, after all, is nothing but common sense. That if in this simple way, the class would interrogate her ways, and follow him attentively, in his experiments, and descriptions of chemical laws, and physiological facts, they would have cause to reject much of the old rubbish of dusty shelves, and have abundant reasons for being more than satisfied with the wisdom of nature, as presented by the results of improvement. Thousands are the disciples of this great philosopher, who have imbibed his doctrines, and borne them away to their diversified homes, in every State of this Union, and in other countries, too, and who cherish, and will carry to their graves, a fond

remembrance of his impressive teachings. He belongs to that superior class of intellectual men, who, by high endowments, and bent of inclination, become explorers, delvers, toilers, in the broad fields of philosophy and discovery. He is, in addition, of that still surer class of original men, who open to mankind new worlds of thought, and new plans of progress and success—make the levers that change and control the affairs of the social fabric, and of human government—point out the ways that best lead to those positive results and triumphs, which are most conducive to the welfare of individuals, and to the prosperity and happiness of mankind. His works on chemistry, physiology, philosophy, intellectual developments of Europe, the war, and various other elaborate publications, and addresses and papers, have given him imperishable renown. Most of them have been re-published in foreign languages, and in the most intelligent and progressive nations are accepted as authentic and standard works, as they are in this country and in England. He is a man of whom any University or nation may well be proud. His reputation is continental, world-wide, colossal, co-extensive with the bounds of civilization. Everywhere known as a patriot, friend of humanity, philosopher, discoverer, he ranks as a giant in intellect and learning among the savans of both hemispheres.

But as we were thus sitting, session after session, at the feet of these Gamaliels, who, with much warm interest and devotion, buckled on us the armor of professional life, it would be unjust to their memory not to meniion more distinctly that important law of their teachings, which animates the profession, and which every true physician must recognize. It is the doctrine of advancement, the law of progress, which they bid us seize, and hold with a firm grasp, and to move onwards all our lives, with the march of improvement. It commands us to gather from the past all that is true and well-tested, and combine it with the light, and authentic instructions of the ever-living, always-prossessive, present. The great truth comes streaming down the lines of advancing civilization, that progress and improvement have been going on ever since organization had an existence. Impressing itself over the whole face of society, it holds that everything is susceptible of improvemeut. It subjects all questions to careful enquiry, all propositions to searching scrutiny. At this enlightened day, all who decline to go to these foundations, and to test all things by the light of reason, and free enquiry, are distrusted, whether matters involved are those of ethics, literature and law, or of science, government and religion. Mere authority has lost its former prestige upon the human mind. Improvements, based upon experience and investigation, is now the watchword. A new departure from obsolete ideas, worn out systems and dead issues, now constitute essential elements of progress. True, there are numerous difficulties athwart its pathway. There is in opposition, ignorance, with its darkened forms; but they yield to the

blazing torch of knowledge, like the morning mists before the piercing rays of the rising sun. There is indolence, with its paralyzing influences; but neither can this long refuse to hide in shame and confusion, before the stirring activity of an industrious community. Greater than all is prejudice—bigoted, inexorable, narrow-minded prejudice—so often the offspring of benighted intellects, and unworthy impulses, and covered over so generally with an iron-clad obstinacy to improvement, and a devotion to antiquated forms, and old fogy notions, so idolatious, that all reforms and innovations are regarded as sacriligious. It hangs as a mill-stone around the necks of a large number of the American people, and is now the main stumbling block in the way of that much needed reconciliation between the two great sections of our Union, so necessary to the welfare and prosperity of all our people. Let us derive consolation from the pleasing hope, that as civilization moves onward in its mighty progress, and secures its triumphs over sacrifices and victims, as they lie strewn in lifeless forms along its pathway, it will, as it sweeps away other opposing forces, also burst asunder the harder than iron bands and stormy casements of blind, stubborn prejudice.

In obedience to those unerring lights of reason, knowledge, and discovery, this talismanic power of enlightened progress is giving to our profession more certainty than ever, and a constantly widening [illegible] medical effort and duty. The floods of light which are [illegible] its pathway, presents varied improvements for the present, and bright hopes for the future never before has medical science asserted such a high and commanding influence in the great [illegible] of science, enterprise, humanity, and religion. [illegible] at command the ameliorating the [illegible] It [illegible] shows the virtue and statesman. [illegible] the products and improvements of the [illegible] and systems of the [illegible] and [illegible] and [illegible] and

, or are ready to desert to the enemy upon promise of being ed. Away from centres of intelligence and manly observ- the proprieties of life, and they are often the veriest dema- that ever infested society. Strangers to any fondness for ries, new books, medical journals, and societies, for promoting erests of the profession; the chief hope of these laggards and gues, as they are thrust aside by the moving, progressive, of their professional brethren, is to prey, as they always do, he ignorance, delusion, and demoralization around them. advantage, some of them, of those political excitements nfortunately too often sweep over the country, pervading with distraction and corruption, they sometimes become in th rampant politicians, and noisy stump speakers, in order into office and power. Of all Southern demagogues, who aims have preyed upon the ignorance, vagabondism, and ation, which always follow in the wake of war and sudden pation, none are more detrimental to the medical profession, ore injurious to society, than these unscrupulous medical rs, and medico-political doctors, who are sure to be always in professions of being regulars. Unable to enjoy the of elevated professional toils and aims, with hearts dead to mpulse of love of science, they are, most of them, mere on, upon the outskirts of the profession, and drag out an e, which, in medicine, sooner or later, ends in failure. to comprehend the true purposes of medical life, most of gard its only aim to be to accumulate riches, whatever the employed. They use these gains, not as wisdom and duty s, but alone to gratify avarice and increase their piles of l treasure. They have hearts too small and miserly for eat philosophy of human life, which sternly enjoins us to

> **"Catch dame fortune's golden smile,**
> **Assiduous wait upon her,**
> **And gather gear by every wile,**
> **That's justified by honor;**
>
> **"Not for to hide it in a hedge,**
> **Not for a train attendant,**
> **But for the glorious privilege,**
> **Of being independent."**

icated by an insane devotion to this god of their idolatry, radicates every generous impulse and manly principle, no al spot is left for science or honor, and they become will- ruits of the vast crowds who rush on to receive the male- of the wise man, "that he who makes the haste to be rich arcely be innocent." For while they receive the obsequious ns of those who seek to profit by their smiles and power, ely will this giddy, unhappy, throng of idolators take the ard grade of life, until, staggering, stumbling, tumbling,

over its dangerons precipice, they finally fall to "die as the fool dieth." The number of this order of physicans has much increased; that numerous body of medical imposters and sharks, under the name of regulars in the South, that the mighty storm of war has washed up from the very depths of corruption, and now, with the swarms of cancer doctors, and consumption curers, are more than ever there preying remorselessly upon the body politic. In the Southern States our profession has not escaped the contagion of the common troubles of the times, and the general demoralization of the war. I refer not so much to any of those of the irregular systems as manifesting this degradation. Southern soil is not congenial to their dogmas—and they have not obtained much of a foothold there. Our miasmatic fevers, sudden congestions, severe complications and active, inflammatory diseases, demand a more vigorous and successful course of treatment than that recognized by the homœopathic and other irregular schools, which find more congenial fields of operations seemingly in our Northern and Eastern States. But our allusions embrace those swarms of charlatans and demagogues in the ranks of legitimate medicine, who, as traitors to its inspirations, take advantage of the derangement of our social fabric and of the wide-spread demoralization of society incident to the war, and for paltry gain and ignoble ends, use the most unhallowed and unscrupulous means for success. There ought to be a provision inserted in the body of every medical diploma issued by any medical college, that whenever the holder violates its high injunctions, or proves recreant to the instincts of a true physician and gentleman, he shall forfeit and return it, and recéive from the profession the punishment of ostracism and disgrace. These expressions are fully authorized by the condition of medical life in the South since the war. It has caused many of our brightest lights and most useful members to abandon the profession in disgust, and to follow more congenial employments. While the incompetent and degraded have so numerously fattened upon the misfortunes of the people, the common results of war have been more or less disastrous upon the true men in the profession, who have heroically resisted the storm, and are now standing faithfully at the post of duty, refusing to use ignoble means to secure desirable ends. The practice of a large portion of this skillful and elevated class, who nobly refuse to bend to unworthy influences, arising from the war, has not more than yielded an economical subsistence. We have been afflicted beyond measure. The interest we have taken in the welfare of the profession, and in the education and general good of those around us, has been materially lessened, by circumstances connected with the bitter contests of the past. Our greatest sufferers have been our noblest and best, who, at the post of danger and sacrifice in war, have now, that it is over, kept their garments unscuched, and their honor unsullied, amid all the besetting temptations to abandon patriotic

duty, and all the sore trials to manhood, which have abounded so much since then throughout our Southern land. But we have not given up in despair. From the mass of drones, skulkers, demagogues, and traitors, that emerge from the ruins of war, and are obstacles athwart the path of medical progress, there are some true men left, to move on the column, and who believe that all things right are possible to the valiant and faithful. It helps no good cause to despond. The toils and struggles through which we have passed have added to our self-reliance, fortitude, and faith, and, rightly used, will afford the best discipline for success in the future. We are slowly recuperating. Blessed with a genial climate, and as rich a soil as the sun shines upon, the stout hearts and industrious hands of our people are moving them onward, with an enterprize and devotion to business unexampled in their history. Rising, Phœnix-like, from the poverty and ashes of the war, we are determined, under all our disadvantages, to regain our former prosperity and strength. To this end we are gradually adopting those liberal and comprehensive schemes of general education, immigration, internal improvements, manufactures, and direct trade with foreign nations, which, with good laws, and a removal of that strange misunderstanding which still exists between the Northern and Southern people, will as surely again make the South prosperous, wealthy, great and powerful, as that effect follows cause. Then, let the turbulent voice of extremists and fanatics, whether of the North or the South, who did so much to bring on the fratricidal war—who were generally so careful, while it lasted, to avoid danger and keep clear of bullets—and who, now that the noise of battle is hushed, are so prone to engage in their old work of strife and disaffection, be drowned in a common feeling of sacrifice, and in a common demand of patriotism. It may be that the war was inaugurated mainly by politicians, who loved self and strife better than peace and country. It may be that they were much aided by misguided enthusiasts of the Christian Ministry, whose cries for blood ill-comported with that good-will and charity which the good Book tells us makes up the crowning glory of their high and noble calling. But believe me when I assure you that the masses of the South who voluntarily went into that conflict, believed their cause was just and right. Give us credit for good motives! Our people were brave and patriotic. Let the war cease in fact, as it has in name. Hearken to appeals made here and now, ye men of the great and prosperous North, for fair play and justice! We are heroically struggling with poverty and other ills of defeat. Place no obstructions in our way, in our honest efforts at recuperation. On leaving, my people placed in my hands the olive branch, and requested me to offer it to you, as I now do. Invest me with the pleasing privilege of telling them, on my return, that you have buried the hatchet! Endow me with the sacred authority of assuring them that the heart of the North beats kind and liberal for the South! Let us, while cherish-

ing whatever is heroic in the dead or the living, forever bury what of bitterness or prejudice has arisen from that unfortunate struggle. Let the honor of the defeated, and the magnanimity of the victorious, as with brave and honest hearts they *fought their fight*, afford common ground, where we can meet on terms of equality, strike hands with the frankness and sincerity of lasting friendship, and vie one with another in honor and love for that old flag of our fathers, which should float, without any distinction or partiality, equally over each and every section of the Union. Gratifying and encouraging is it to know that, above the darkness of the past, and the anxieties of the present, the radiant bow of promise more hopefully spans the shadowy future. Let the past dead bury its dead; we look to the good of the living.

In this spirit of sacrifice, duty, and progress, it is with becoming pleasure and pride that we now refer to the rank and file of that other division of progressive and representative men in medicine, in contradistinction to those of whom we have been speaking. These are the men of labor, of love, of science, and the profession, who deliver lectures, write books, edit journals, establish schools, organize and sustain societies, erect hospitals, and who consider it gain to toil, and explore and practice, and make sacrifices, not alone to support their families and educate their children, but for the additional object of advancing science and elevating the profession of medicine. They regard it as the science of the best interests of society, not only in the cure of disease, the relief of human suffering, and the prolongation of the average duration of human life, but in the aid given to the controlling philanthropists, philosophers, and statemen of the age, in all their efforts for the welfare of mankind. Comparatively few in number, they are nevertheless those who have taken it from the ignorance, superstition, and uncertainty of the past, and arrayed it in the intelligence, progress and success of the present. By intellect and devotion they have made such invaluable records of service, contributions to science, and of noble purposes accomplished, as have given the profession its present advanced position of honor and distinction. They have impressed themselves with lustre upon the times in which they lived, have made the world wiser and better, and by their qualifications and usefulness, are more entitled to the admiration and veneration of mankind than

> "The shadows
> That keep the keys of all the creeds."

Onward is the inspiring watchword which pervades their ranks. It recognizes the value and wonderful discoveries of the microscope, with its improvements since Galileo first presented one, in 1612, to the King of Poland. Its interpretations of biological and pathological phenomena, under the directions of able microscopists, have greatly enriched the pages of physiological and pathological

researches, and, exploding theories of the past, we have now more efficient methods of diagnosis and treatment. The investigations and cell doctrines of that remarkable man, Virchow, open new and attractive fields of interest to the votaries of physiology and pathology, and promise great good for the future. His cell theory of the cellular formation of elementary structures, and of organization with his cellular pathology, in contradistinction to the old doctrines of humoralism and solidism, his bold investigations of previous doctrines of histology and inflammation, and his threatened assaults upon much of what has heretofore been regarded as true, are full of interest, and loom brightly in the firmament of enquiry. Investigation was never so busy and bold as now. The triumphs already won in the field of knowledge of the laws of life and health, and their relations to disease and treatment, are precursors of others yet to bless mankind. It is not likely that the theory of vital force will be subverted by these modern experiments and enquiries. It stands upon the impregnable basis of an innate capacity of reproduction, of an original motive power, of a Great First Cause. There the great doctrine of vital phenomena has stood immovable in the past, and in the future will defy the assaults of enemies and the shocks of time. But they are opening our eyes wider to the processes of nature, giving new light in the interpretation of her laws, and of consequence more satisfactory views of diagnosis and remedies. Whether we are to remain in the more moderate and more expectant channel of treatment suggested by the prevalence of the asthenic type of disease, or whether some recurrence of the sthenic form is to re-inaugurate the old antiphlogistic system, it will be for the future to disclose. Certain it is that the modern German School of Medicine is making unparalleled progress. Its success is the more assured, because it is based upon the true plan of constructing theories out of facts, and of not bending facts to suit theories, started and sustained often by mere pride of assumption. From the battles of controversy, which new ideas and innovations always provoke, error will be dissipated, and the truth established. Germany is now, more than ever, attracting the commanding attention of the civilized world in the remarkable progress there of knowledge, and developments of the arts and sciences, as well as by the discipline and system in which all the affairs of life and matters of government are carried on. That same mode of patient procedure, systematic toil, and love of learning, which has given to that great nation her admirable system of education, and such astonishing success and prestige to her military men, is imparting a like impetus to the medical sciences, and blessing the medical world with her Niemeyers, Billroths and Virchows.

The revelations of the microscope and other means of observation and enquiry derived from the steady advance of chemistry, physiology and pathology, are gradually solving those perplexing phenomena of life, yet concealed in the arcana of nature. The

flood of light emanating from these sources, and dispelling the darkness which has so long concealed functions of organs and processes of the economy, is, at the same time, securing an exactitude in the means of diagnosis and treatment, not before attained in all the improvements of the profession. The treasures of the past in combination with the developments of the present, are investing the study and practice of medicine with new interest and more certainty, and imparting to surgery a higher grade of usefulness and efficiency. The success in the treatment of infirmities formerly deemed incurable, and the wonderful resources of nature and appliances of art, in the cure of injuries and wounds, and in the management of distorted and broken limbs, would startle with astonishment some of our brightest lights of the past, could they rise from their hallowed graves and behold the progress and advancement made and dawning upon the present enlightened period of the nineteenth century. We are at last about to reach the time foreshadowed by Pope, when

> "The dumb shall speak, the lame his crutch forego,
> And leap exulting, like the bounding roe."

In this connection you will pardon an expression of State pride, and even of State's rights, in the remark, that the first operation for club foot ever performed on the American Continent was by an eminent and lamented surgeon of my own State, Dr. James H. Dickson. He operated at Fayetteville, North Carolina, in the month of January, 1835, upon a limb greatly distorted and much shortened, and the operation was entirely successful. The leading physician of that State before and at his death, he was one of the ablest and most distinguished medical men in the whole country, and none of our illustrious dead have left a nobler record for purity of life, Christian graces, and high-souled devotion to duty and his profession, than has this modest gentlemen, and accomplished, successful physician. He fell nobly, with his harness on, a victim of yellow fever, in the heroic discharge of his duty, during the prevalence of that scourging epidemic, which, in the year 1862, so greatly depopulated the now flourishing City of Wilmington, in that good old State.

The medico-chirurgical features of the late war as arising from the experience and observations of Southern army surgeons, convey some lessons of instruction and of enlarged views, which ought not to be lost upon the profession. It is to be hoped they will, at no distant day, be collected and given that form which will ensure a just weight and influence North as well as South. It has always been the case that great wars are new starting points in medicine and surgery, as well as in law, politics and government. Southern experience offers lessons of like import, and the late war adds much to the settlement of questions of doubt and interest in our science, and art, as it has settled other matters bearing upon

manity and government. It has given increased confidence in
e Southern States in the use of chloroform, although it holds a
ondary position here in New York and other large medical cen-
s. The reports of the surgeons of the various regiments, bri-
des and divisions of the Southern armies throughout the war,
e almost unanimous in favor of its use and preference over any
ier anæsthetic. So far as ascertained, this is believed to be the
neral experience of the profession in the South. This great boon
science to humanity maintains again it seems, to a great extent,
former high position in most of Europe, after a temporary loss
popularity in some parts, from a few fatal results of its use. Its
vocates contend that the main objections to its use are unsus-
ned by facts, and the legitimate inductions of science and ex-
rience. The just interest investing the whole subject will, ere
ıg, without doubt give to this pain-quelling remedy its true
ıtus in the profession.

Ether and chloroform! What a priceless inheritance from science
mankind! To Sir Sames Y. Simpson we are indebted for chlo-
form. To John C. Warren for chloric ether. To Morton and
ckson must be acceeded the high honor of originally using ether
an anæsthetic. But while the daring genius of one European
d these native Americans has covered their names with immortal
nor, in connection with these blessed agents, a still higher honor
longs to our own Wells, for being the *first to demonstrate Anæs-
esia to be practicable. Anaesthetics* belong to the others, *Anæs-
esia* to him. Like many a discoverer before and since, he was
altreated and robbed of his hard-earned laurels, by pretended
ends. Like thousands of the noblest and best in the broad fields
science and invention, this able explorer was neglected, and
ent down to his grave, overwhelmed with disappointment and
rrow!

The greatest Southern lesson is the evidence afforded of the
ower of the human economy in the case of wounds and injuries,
ıd in the relief of medical diseases. None are more ready to
lmit this fact, both in theory and practice, than the staunch advo-
ates of antiphlogistic measures, in the treatment of the sthenic
rm of acute inflammatory action. In my four years' service in
ıe armies of the South as surgeon, there were at least twelve
ousand cases, of almost every variety of disease, medical and sur-
ical, which passed through my observation and treatment in field and
eneral hospitals. This great conservative law is the most impres-
ive and lasting, from all that experience. Not that the skill and
ppliances of surgery, and the resources of medicine are of less
alue and importance now than at any former period. So far from
his, they were never more indispensable than during the war and
ince. That great contest affords overwhelming testimony of the
inappreciable value of such aid, and of the great power and neces-

sity of the physician and surgeon to armies as well as to the community. It is as true now as in the past that

> "A wise physician skilled in wounds to heal,
> Is more than armies to the public weal."

But it proves, contrary to former theories and teachings, that very few surgical injuries and wounds are inevitably fatal. Thousands of brave soldiers in the South, and no doubt in the North, now live to testify, in their own wounded persons, that though they were shot through the head, lungs, liver, and other vital organs, they nevertheless recovered, contrary to all former surgical opinion, and are now healthy and useful citizens. The danger of death from primary hemorrhage on the field, so much feared in both armies early in the war, and which became to be disregarded as experience showed that nature in most cases was, with some simple adjuvant, an efficient styptic in closing the wounded artery, finds a parallel in that restorative power of nature which rendered bullet forceps useless appendages to our surgical cases, and we returned home with them rusty. The same restorative action was seen in the reproduction of bone, often from a mere vestige of periosteum, and shows, with other instructions of the times, that a new era in conservative surgery has dawned upon us. The numberless mutilations and amputations, not necessary to save life or limb, are full of warnings for the future, to avoid Scylla, as well as Charybdis, in the application of the constantly improving art of surgery in all its relations to bony structures, as well as soft parts.

In no respect have the scientific lessons of the war been more instructive than in the increased importance given by them to the great questions of hygiene and sanitary science. Not only was an observance of their laws effective in warding off disease, but essential to the relief and cure of vast numbers of the accidents and diseases of the Southern armies. The blunders committed in the beginning, as to the health of soldiers, were greatly owing to the defective knowledge and literature of the subject. Most of the publications on the Materia Medica are sadly deficient as to the influence upon health and life of those great agents, air, sunlight, food, and dress. Not only were open barns and sheds more conducive to the recovery of the sick and wounded than close structures, however elegant and costly, but open tents were preferable to either, when the season and weather would permit, because more pervaded by good air and sunshine. That scourge of our armies, camp fever, or typho-malarial disease, as more properly called, with all its complications, was more manageable when treated in this way than in the confined air of hospital buildings, and the same was true of erysipelas, gangrene, and other diseases incident to army life, and sequalæ of wounds and injuries of battle. Early in the conflict, when Southern soldiers were supplied with an abundance of excel-

it tents, and a superfluous amount of badly cooked food, there us an immense amount of sickness, and great mortality among em. Later, and towards the close, when they were more con-ntly on the march, and tents almost unknown, and they were liged to sleep on the naked ground, with the canopy of heaven a covering, there was, amid all the privations of those memorable nes, less sickness and decreased mortality in their ranks.

A counterpart in Southern life is seen in the finer developments, althier looks and lives, and hardier living of the children of rofulous and consumptive parents, who, while supplied with sim-e but nutritious diet, live in open houses, often log huts, the year und, over the pale faces, attenuated forms, and sickly existence the off-spring of similar parents of the same location, who pass ves in luxurious living and wealthy mansions, from which are so ten excluded these natural and invigorating forces of heaven for ising children and promoting health and longevity. The princi-.e finds exemplification in the legions of Southern soldiers, who, aving home robust, stalwart, vigorous and resolute, succumbed to ie privations and insufficiencies of army life, and were easy vic-ms of disease and death. Those of a contrary type, often with iberculous formations and the hectic glow of consumption on their eeks, and who escaped other casualties of war, were, as a general le, either greatly relieved or finally restored by the exactions of rmy life and the roughness and open air of field service.

These lessons are not to be disregarded in the theories and prac-cal details of professional life. The physician who fails or re-ses to profit by them, is not imbued with the spirit of the onward ogress of medicine. Whether he belongs to one or the other of e great schools of legitimate medicine that divide on questions of ysiology, pathology, and therapeutics, he cannot, unless dead to improvement, fail to obtain more comprehensive views and re practical skill from these new chapters of the new editions of e great volumes of nature. Omitting to do so, places him either th that class of laggards and sluggards, who are too indolent read and labor, and never have any views or thoughts of their n, or he is one of those inexorable, narrow-minded, victims of ejudice, who never consent that dead issues of the past, whether politics or science, shall be buried, as a common sacrifice, in the ave of oblivion.

With a wise appreciation of these lessons of the war, whether in eir bearings upon medicine and surgery, or as they relate to the rsuits, interests, rights and duties of the people in every section our common country, let us keep our minds imbued with that vely spirit of professional advancement demanded of every phy-cian, and our hearts warmed with that unselfish devotion to ght, truth, duty and country, incumbent upon every true man. is only by keeping pace with these steps of progress, and this dvance of civilization, that we can keep our armor bright, our

hearts warmed, and our arms nerved, for the duties before us. Then it is, and then only, that we can enjoy the pleasures of that mental and physical labor of professional life, which constitutes the laws of compensation for its ingratitude, its consuming cares, and distressing anxieties. Then it is that we can carry with us in our daily lives a realization of the truth of Goethe, that "pleasure, comfort, and interest in the affairs of life, are the only realities; all else is vanity and disappointment."

Fellow members, I have already detained you too long, and will only tax your wearied patience with one more word. The change not yet generally known, which brings the medical department in closer relations with the University proper, is an important one, and devolves new duties upon this Association. It gives us, by authority of the Council, a representation in their deliberations and a voice in determining the policy of the College. While this arrangement increases the bond of sympathy and adds to the responsibilities of the Association, it likewise augments the influence and usefulness of the College in all parts of the country. Let the movement for an endowment be carried forward with energy to success, and renewed vitality and prosperity will rejoice the hearts of us all. Let this be immediately followed by a grand enterprise of establishing a large general hospital in connection with the University. If the Association will engage in the laudable work of endowing one or more Alumni Wards in such a hospital, new lustre will be added to the honored name already won, in collecting the records of the officers and graduates of the University, and in advancing the cause of medical literature and science. The attachment of the Association to the welfare of the College renders it unnecessary that I should appeal to every Alumnus to cling with filial devotion to our proud and distinguished mother. She nurtured us in our medical childhood, sustained our earlier manhood in the profession, is the readiest to sympathise with our misfortunes, and the first to exalt in our triumphs. No more can the fondest mother do for her offspring. And like an indulgent parent too, all she asks in return is, that while true to ourselves, to the Association and the profession, we will, as exponents of her own character, which rests mainly upon our own shoulders, protect her honor and defend her fame. Is there any graduate of the College so lost to gratitude, to every sense of duty and affection, as not to sally at all times to her destinies with a stout heart and strong arm, and a voice ready to proclaim her merits and distinction? Fires may consume her archives, and structures in the future as in the past they have crumbled them in ruins, but neither this or any other disaster is competent to consume the undying love of her children and friends. Under the administration of an able and devoted Faculty, who deserve and enjoy the confidence of the profession and the country, we can unite with these distinguished Professors and immediate guardians, in the proud satisfaction of

nowing that she is marching on in her allotted sphere of useful-
ss and triumphs, and is distinguished among the first of the
remost of the medical colleges and universities of the country.
Every age has its peculiarities, and presents its special wants to
e philanthropist, statesman and Christian. The present yields to
former time in its demands for a high type of manhood in all its
nobling virtues of integrity, intelligence, patriotism and religion.
n the one hand our hearts are gratified at the unexampled mag-
ficence in enterprize, industrial art, material improvement. and
tellectual progress, which pervades most sections of the Union,
elding an abundance of wealth and success, and making this
estern Continent the hope and asylum of the down-trodden of all
ations. On the other hand, there has arisen in other sections a
egree of ignorance, and pauperism, and demoralization, and every-
here a grade of wild speculation, disregard of principle, and a love
money and self, which originates a *moral malaria*, as detrimen-
l to our moral nature, as the poisonous malaria of our Southern
vamps is ruinous to the health of the physical system. While
ience and industry supply so many wants of the country, the stir-
ng events and tendencies of this restless age are loud in the de-
and for virtue, honesty, patriotism and humanity. As we float
long in our own frail barks, down the stream of life, and see its
irred and foaming waters intermix with eddying currents and
ashing cataracts, it will be for our own election and skill to decide
hether we shall be swept beneath its seething billows, or remain
ecure above the raging storm. As our profession has always been
istinguished for its patriotism and humanity, as well as for devo-
ion to truth and knowledge, let us discharge with fidelity the
assing duties which every man owes to himself, to the community,
o his country, and to his God. This spirit will invoke hope, forti-
ude, and strength, to bear with the ills and trials of life. It will
eget an expansive love for the great cause of human justice and
earning, and give us hearts of becoming devotion to the welfare,
erpetuity and glory of the Republic.

ART. II.—*Subinvolution of the Uterus.* By S. BARUCH, M. D., Camden, S. C. (*Continued from page* 44.)

Treatment.—The therapeutical management of Subinvolution may
be prophylactic, curative or (in the third stage) simply sympto-
natic. When we recognise the firm hold which the customs and
enervating habits of modern society have taken upon our women,
we would fain shrink from the office of reformer. The importance of
checking these mischievous practices, that sap the very fountains of
health in the women of the present day, cannot be overestimated:

but this essay is intended for medical men, who are doubtless well informed on these topics, and a simple allusion must suffice.

The task of instilling into the minds of our women some knowledge of hygiene, and of the frightful consequences of infringement on the laws of nature, involves overwhelming difficulties. It is our duty, however, to meet these boldly, and protect, by our constant and unremitting warnings, the health and lives that are in our keeping. It will probably be a gratuitous effort to dissuade young and unmarried girls from their suicidal course, but after they have entered matrimonial life, they will heed our advice, and it will perhaps not be too late to benefit them. After abortions, especially, it is important to retain them, physically and mentally, in a perfectly quiescent state, and to teach them the serious results of negligence.

Much may be done in labor at term to insure firm contraction of the uterus, and thus prevent subinvolution. Credé's method of "expressing" the placenta should be invariably practiced, as it will ensure the patient against hemorrhage, retention of clots, and septicaemia. Firm, but gentle pressure upon the uterus, by means of bandage and compress, should be insisted upon during the first three or four weeks, notwithstanding the scorn with which this time-honored practice is condemned by some recent innovators.

After accouchement, the usual measures adopted by all intelligent physicians should be strictly carried out, and it is the duty of the attendant to continue his watch over the puerpera for ten days at least, even if all goes on well. We are too apt to be lulled into false security, when, on the fourth day, we find the patient bright and cheerful, and free from abnormal symptoms. Often we cease attendance on that day, and our patient concludes, notwithstanding our instructions, that she is well, and that the restraint imposed upon her is but a refinement of cruelty. The most important point, however, in this connection, is the faulty system of dieting lying-in-women. As has been mentioned above, the unwise practice of starving them, *à la Broussais*, obtains in all classes of society. It cannot be sufficiently inveighed against, for the practice is so firmly rooted in the minds of the people, that I have often been called upon to contend against disobedience of my instructions upon this point. This is doubtless the experience of most physicians.

It is my custom to consider the puerpera as a healthy woman, unless I have reasons to suspect some pathological condition. She should, therefore, not be greatly restrained in her diet at any period of her lying-in. Regarding the shock and loss of blood incident to labor, I do not permit any solid animal food to be taken until after the establishment of the lacteal secretion. Broths, good bread, soft boiled eggs, and other easily digested articles of diet, however, should be freely given, accompanied by an occasional draught of good wine. After the lacteal secretion is established, and the bowels have been moved, the puerpera should resume her ordinary diet, modified only in so far as her quiescent state de-

mands. If she is much exhausted by the labor, stimulants should be used; the administration of Tr. Cinchona, or the Ferrated Elixer Cinchona, will be found advantageous.

After the fourth week, inquiry should again be made with reference to the condition of the uterus. Should the patient complain of bearing-down pains, lumbar uneasiness, or any of the symptoms above detailed, measures should at once be instituted to meet these symptoms. Counterirritation to the lumbar region, by sinapisms alternately applied, each day, to either half of the sacral region, will be found of service. Injections of lukewarm water, medicated with a small quantity of Tr. Myrrh, will cleanse the vagina, and render the patient more comfortable. Nutritious diet, and carriage or sailing exercise, will aid in generating that tone of the general system, the absence of which may be the cause of the existing trouble. Should these measures fail, and the case continue to develope, active measures should be instituted to restore the uterus to its pristine condition. No time is to be lost, for a prolonged continuance of subinvolution will terminate in that permanent alteration of tissues, in which it will be out of our power to do ought but alleviate the existing symptomatic troubles. A uterine examination, by sound and speculum, should be proposed and insisted on. If, as is rarely, though sometimes the case, the patient declines to submit to such examination, the attendant should, in justice to himself, at once surrender the case. A continuation of treatment without exact knowledge of the pathology of the case, will only bring discredit upon himself, and accrue to the injury of the patient.

The uterus may be found greatly enlarged, the sound entering from three to six inches. To stimulate this organ, Simpson's large sound should be introduced for a few minutes, twice each week. At the same time full doses of Fl. Ext. Ergot should be administered *per oram, or per anum.* These measures failing, the weekly introduction of sponge tents will serve to arouse the latent contractility of the uterine vessels. After dilating the vagina with the Boston speculum, the introduction of sponge tents will be rendered very simple by the use of my sponge-tent carrier, described in the Transactions of the South Carolina Medical Association for 1870. This is a simple instrument, which any country tinsmith can make in a short time, and will be found extremely useful.

Another method of stimulating the uterus, when the cervix has become somewhat indurated, is by hot water douches to the latter. A quart of hot water, as hot as the fingers can bear, should be injected three or four times a day. At the risk of being tedious, I would suggest a more thorough instruction of patients in this matter. I have on several occasions treated patients who, under direction of their former attendant, had been using injections for months, without benefit. On inquiry I usually found the instrument used a common glass or rubber (female) piston syringe, holding about

two ounces. With this imperfect instrument it was so difficult and fatiguing to inject any large quantity of fluid, that the patient gave it up in disgust Davidson's, Mattson's, and all other syringes in which the fluid is propelled by hand pressure, are valuable for enema purposes, but should be eschewed for vaginal injections. I am aware that these are popular instruments, and in former years I invariably recommended them. But during the past three years I have several times met cases of uterine colic produced by the influx into the patulous os of one of the little jets from the many-eyed female tube, and in one case I distinctly traced a uterine colic, followed by pelvic cellulitis and abscess, to this cause. The patient was perfectly well, when, upon rising one morning, and using her syringe, she was suddenly attacked by terrific pains in the abdomen. Being a next door neighbor, I fortunately saw her at once, and found her in a state of imminent collapse, gasping for breath, with distressed countenance, great thirst, and icy cold extremities. The usual treatment brought about reaction, but this patient hovered on the verge of death for ten days, when the abscess discharged its contents into the rectum. I have never recommended this kind of syringe since that time, and am glad to state that I have found the Fountain Syringe perfect for the vaginal douche. The force and strength of the stream can be graduated with exactness, without impairing its efficiency. I cannot conclude the subject of injections without expressing my condemnation of the indiscriminate use of strong astringents, that is so popular with many physicians. Red Oak Bark Tea and Alum make a powerful combination, which I have found to be very popular in Leucorrhœa. The practice of treating such cases, without examination, empirically, cannot be sufficiently condemned. A case recently under my treatment, afforded an illustration that is worthy of mention. A lady applied to me for treatment of some vaginal discharge. She stated that there was a growth of some kind in the vagina, that was daily increasing, and that her discharges were sanious and purulent. She had been using "Red Oak Bark and Alum," and I found the suspected growth nothing more than coagulated secretions, which were easily washed out by a hot douche. Examination with the speculum revealed a small polypus, pendant from the os. I twisted this tumor off, and the discharge ceased from that moment, without any further injections. A thorough investigation of the case by her former attendant would have precluded the use of "Red Oak Bark and Alum" for six months.

Should erosions be found on the cervix or in the canal, they should be touched once a week, after being thoroughly cleansed of the mucus or pus that envelops them, with chromic acid, one part to three of water, or the pure Tr. Iodine. The application should be followed by the introduction of a plug of cotton, saturated with glycerine, to which a cord for the purpose of withdrawal has been attached. The plug should be retained twelve hours, and will

produce a watery secretion. Should the erosions extend into the uterus, they should be pursued, after dilating the cervix by sponge tents, and treated as above. The method of introducing weak solutions of iodine, chromic acid, sulphate zinc, or carbolic acid, into the interior of the uterus, by means of bits of sponge, held in Sims' sponge-holder, will be found extremely useful, also in stimulating the uterus to activity and involution.

Counter-irritation to the lumbar region should be diligently pursued; in obstinate cases a blister with cantharidal collodion, will be necessary. Hipbaths are now exceedingly useful. They should be carefully used on rising from bed. I usually direct the patient to seat herself in a large tub of tepid water, with her feet outside towards a warm fire. After the lapse of a few minutes, she is directed to pour cold water, previously placed within reach, along the inside of the tub, until she finds the water in the bath chilling. She should then rise at once, dry with a soft towel, and follow by violent frictions. These details may seem superfluous, but they are important. Without exact directions, our patients will plunge themselves into a cold bath, remain in it until chilled beyond their power of reaction, and thus increase the very laxity we are endeavoring to remedy.

The most annoying, troublesome and intractable symptom which many cases of Subinvolution present, is *menorrhagia*, and to its treatment we will be called upon to devote much of our attention. There are two varieties met with, viz, active and passive hemorrhage. The former occurs usually at a menstrual period, which is ushered in by the natural phenomena. The flow continues a few days, when suddenly it increases to a violent hemorrhage, or it gradually becomes more profuse, until the patient is greatly debilitated. In these cases, rest in the recumbent posture should be enforced at the beginning of the menstrual period. The internal administration of astringents has, in a large number of cases failed to produce any impression, although I have faithfully used Fl. Ext. Ergot, Ol. Erigeron, Plumb Acet and Opium, and Ol. Terebinth. The latter has proved the most efficient of these, given in doses of twenty drops every two hours. When the hemorrhage is very profuse, vaginal and rectal douches of cold water, and applications of cold wet compresses to the abdomen should be directed. These failing, the uterine os should be plugged with a sponge or cotton tampon, carefully introduced and supported by a vaginal tampon. In a small number of cases we will fail to arrest the hemorrhage by all these measures. Recourse should then be had to dilatation of the cervical canal by sponge tents. When this has been thoroughly executed, a catheter should be introduced well up into the cavity of the uterus, and one ounce of Squibbs' Liq. Ferri Persulph injected. A tampon is now introduced into the patulous os, and on the following day the hemorrhage will almost invariably cease. This

treatment is heroic, but the safety of the patient demands it, and it should be unhesitatingly adopted.

Immediately after the cessation of the menses, the cervix should be freely dilated, if that has not already been done. The uterine cavity should be thoroughly explored with Recamier's Spoon or Thomas' Wire Scraper. These instruments will probably bring forth some of those fungoid excrescences that are the chief origin of the violent hemorrhages of Subinvolution. These growths should be completely removed, and the cavity brushed or swabbed with Liq. Ferri Persulph, or Tr. Iodine.

The passive variety of hemorrhage is characterized by the more or less constant presence of the sanguineous discharge, the intervals of freedom varying from a few days to two weeks, and the flow never reaching a dangerous point. In these cases there is always a loss of tone in the general system, which should be [illegible] Cold vaginal and rectal douches are [illegible] to be too strictly insisted on, as the [illegible] and absence of proper exercise, and fresh air may enhance [illegible] Ex. Ergot. Ar. [illegible] [illegible] syphilis, are more [illegible] [illegible] [illegible] immediately by Iodine, [illegible] [illegible] [illegible] [illegible] [illegible]

case, and the idiosyncrasies of the patient. The cold sponge bath, followed by friction with a hair brush or coarse towel, passive exercise in the open air, and good diet should be recommended. A sojourn at some of the mineral springs, or a mountain resort, during our relaxing summers, will do much to assist the other measures adopted. In fact, nothing should be neglected that would tend to restore the patient's constitutional vigor; no intelligent physician will be at a loss to suggest appropriate measures to accomplish this end.

When Subinvolution has reached that stage in which curative measures are futile, we are still capable of accomplishing much good for our patient. The constitutional treatment should be diligently conducted, and the local troubles combatted as they arise.

Flexions and versions of the uterus demand the adjustment of a proper pessary. This, however, is a subject of such vast magnitude, that I cannot enter into its discussion. Hot water vaginal douches and anodyne enemata will allay the irritability that frequently accompanies these deviations. Altogether, we will be more successful in the alleviation of these cases, when properly supported by a good pessary, than in those versions which are the sequelae of inflammatory action.

ART. III.—*Communication of Yellow Fever through the Mother to the Fœtus in Utero; with Observations upon the Communication of Small Pox to the Fœtus.* By JOSEPH JONES, M. D., Professor of Chemistry and Clinical Medicine in the Medical Department University of Louisiana; Visiting Physician of Charity Hospital, New Orleans.

It is possible for yellow fever to be communicated through the mother to the *Fœtus* in *Utero*.

I have had the opportunity of illustrating this proposition by the following observation:

CASE ILLUSTRATING THE COMMUNICATION OF YELLOW FEVER THROUGH THE MOTHER TO THE FŒTUS IN UTERO.

Mary Heitman entered Charity Hospital, New Orleans, Louisiana, October 1, 1871, with fever, and intense pain in head and back.

On the 4th day of October, (3d day of disease) patient presents all the symptoms of yellow fever; conjunctiva jaundiced, eyes injected, capillaries of mouth and gums congested, capillary circulation sluggish, surfaces of extremities mottled, nasua and vomiting. Patient suffering with uterine hemorrhage.

In support of the latter opinion Mr. William Fisher* recorded
e following case:
Mrs. Fagg, 22 years of age, when in the seventh month of her
t pregnancy, had the confluent small-pox; from which, contrary
expectation, she recovered, went her full time, and was delivered
a fine child. Frequent solicitations were made for permission to
ulate the child, which was refused by its parents, from a sup-
ition of its having had the small-pox previously to its birth.
wever, at the age of 12, the child was inoculated, and had the
ll-pox in the most satisfactory manner.
The two following cases, recorded by Mr. Fisher, on the contrary,
l to prove that those persons who have resisted the variolous
ction, in every form, must have undergone the disease when in
foetal state:
Mrs. Alexander, of New Cross, had the small-pox when near the
mination of her pregnancy; but the kine was so mild that she
capable of pursuing her occupation, as a washerwoman, al-
ugh in daily expectation of being confined. The infant was born
a the small-pox upon it.
Margaret, wife of William Crawby, residing at Camberwell, in
infancy, had the small-pox, severely, to which her countenance
e ample testimony. In March, 1788, she nursed her son Thomas,
ild, under the confluent small-pox. She was at that time preg-
t of her fifth child, and very near the end of her reckoning.
se people being in low circumstances, had but one room, in which
whole family lived and slept. On the 1st of April, at three
ock in the morning, she was delivered of a girl. Three days
rwards the boy Thomas died, and on the same day Mr. Fisher
desired to look at some pimples upon the infant, which proved
e the small-pox, the marks of which she bore upon her face, even
r attaining womanhood, and although frequently exposed to the
ll-pox, never contracted the disease.
The latter case proved that the foetus in utero is liable to the
ll-pox, from the influence of surrounding infection, although the
her was herself protected by a previous attack of the disease.
Mr. William Rait† recorded the following case, similar in some
ects, and even more remarkable than that of Margaret's,
quoted:
During the prevalence of small-pox, and whilst Mr. Rait was at-
ding such cases, a lady, who manifested no symptoms of small-
, was delivered of a male child, upon whom the small-pox erup-
n appeared two days after its birth. The disease went through
course of genuine small-pox. Upon enquiry Mr. Rait ascer-
ned from the mother of the lady (grandmother to the child) that
mother was born with the small-pox.

NOTE.—Cases of small-pox in the fœtus by William Fortas, Edinburgh Med. Sur-
l Journal, vol III, 1807, p. 307.

NOTE.—Medical Commentaries, by Andrew Duncan, vol. iii., 1789, p. 318.

Dr. Laird* has described the following case of a pregnant woman, who was seized with small-pox:

About the end of August, 1805, she felt the motion of the child till the month of October, and on the 28th of that month she was delivered of a dead child, which was thought to be of six months' growth. On the back, shoulders and side, and particularly upon the upper parts of the thigh, where the integuments were perfectly sound, there were several pustular eruptions, with central depressions, strikingly characteristic of the appearances which distinguish small-pox.

The foetus was placed in the Museum of George's Hospital, and distinctly exhibited the characters of the eruption.

This history confirms the observation that the foetus partakes in many of the diseases of its parent.

Mr. Lynn published in August, 1786, the following decisive instance of small-pox in the womb:

In November, 1785, the wife of Mr. Ere, a coachmaker, in Oxford street, being then in the eighth month of her pregnancy, was seized with vigorous pain in the back, and other febrile symptoms. In two days' time the disease showed itself to be the small-pox, and though the pustules were of the distinct sort, yet they were uncommonly numerous. On the eleventh day they began to turn, and on the twenty-second day her labor took place, which, according to her reckoning, was a fortnight before the regular period; that is, when she was advanced in her pregnancy eight months and two weeks.

The child, at the time of its birth, was covered with distinct pustules, all over its body. They did not appear to be full of matter till three days after; at which time I took some of the pus upon a lancet from one of the pustules on the face. With this lancet Dr. Lynn afterwards inoculated, on the 2d of December, 1785, a child of Mr. Charters, in Church street, in both arms. On the 7th, the inflammation began to appear in each arm, and continued daily increasing, till the 11th of December, when the child sickened, and was affected with all the symptoms which usually precede the eruption. On the 12th the sickness and fever abated, the pustules of the distinct sort of small-pox made their appearance, and the child having regularly gone through the several stages of the distemper, was perfectly well in three weeks.

Dr. Edward Jenner,† entertained the opinion that the susceptibility to receive the variolous contagion always remains through life, but under various modifications and gradations from that point, when it passes silently and imperceptibly through the constitution (as is frequently the case with cow-pox), up to that where it appears in a confluent state, and with such violence as to destroy life.

*NOTE.—Edinburgh Medical and Surgical Journal, vol. 3, 1807, p. 155.

†NOTE.—Medico-Chirurgical Transactions, vol. 1, London, 1815, Third Ed., pp. 271–277.

It is only under particular circumstances that any proof of the resence of small-pox can be adduced in these cases, in which it asses through the frame without producing eruptions, or in any erceptible degree deranging the animal functions.

Such proof, however, as Dr. Jenner clearly exemplified by the llowing remarkable cases, is afforded by the obvious infection of e foetus before birth, communicated through the mother, herself ing already secure from any visible occurrence of the disorder.

Dr. Edward Jenner was requested, by Dr. Croft, to vaccinate the fant of Mrs. W., a lady in Portland Place. The vaccine fluid, ich was inserted fresh from the arm of another infant, produced rcely any effect, beyond a little efflorescence in the part, which a few days disappeared. When Dr. Jenner expressed his surise at this, such an occurrence happening very rarely, Mrs. W. moved his embarrassment by the following narrative:

A few days previous to her confinement she met a very disgustg object, whose face was covered with the small-pox. The smell d appearance of the poor creature affected her much at the time, d though she mentioned the circumstance on her return home, she d no idea that her infant could suffer from it, having had the all-pox herself when a child.

During a few days after its birth, the little one seemed quite well, t on the fifth day, it became indisposed, and on the seventh the all-pox appeared.

The pustules, which were few in number, matured completely. r. Croft, who attended her, being curious to know the effects of oculation from one of the pustules, put some of the matter taken om one of them into the hands of a gentleman eminently versed the practice, which produced the disease correctly. Mrs. W. as not sensible of any indisposition from this exposure, nor had e any appearance of the small-pox.

Another case, similar in its general character. to the above, was mmunicated to Dr. Edward Jenner, by Mr. Henry Gervis, a surgon of eminence at Ashburton, in Devonshire.

Mr. Gervis says: The small-pox, having appeared in the village Woolson Green, about three miles from Ashburton, on the 6th of ay, 1808, I vaccinated a poor woman, the wife of James Barkell, who was in the last month of her pregnancy. Her three chilen had been inoculated the preceding day with variolous matter, the surgeon who attended the poor of the parish, and who had ery properly declined inoculating her also, from her particular tuation. I made two punctures in each arm, each of which fortutely succeeded, and she regularly passed the disorder, complaing only on the tenth and eleventh days, when the areola was most tended, as is usual. I saw her very frequently during the proess of the disorder, and once or twice after its complete terminaon. I therefore can speak positively, that during that time she bored under no symptoms but what is connected with the cow-

pox. From this period she continued perfectly well, and on Saturday last, the 11th instant, she was delivered of a female child, having at the time of its birth many eruptions on it, bearing much the appearance of small-pox, in the early stages of the disease. This event happened five weeks after her vaccination, and one month after she had been exposed to the variolous infection of her own three children, and that of several other persons in the same village. On the 14th I visited the child again, when I found the eruptions had increased to some thousands, perfectly distinct, and their character well marked. * * To put the matter beyond all doubt, I armed some lancets with the virus, and produced the small-pox, by inoculating with it. In addition to the circumstance of the mother conveying the variolous infection to her unborn child, without feeling any indisposition from its action in her own constitution, I must remark, that there cannot be a stronger proof of the efficiency of vaccination than this case afforded.

Dr. Jenner, without producing more examples, of a similar description, though he affirmed that many were before him, observes, that a fact, not unlike the preceding, fell under the observation of Dr. Mead, who, in his discourse on the small-pox, (Chap. 12, p. 337, 1772,) relates the following case:

A certain woman, who had formerly had the small-pox, and was near her reckoning, attended her husband in the distemper. She went her full time, and was delivered of a dead child. It may be needless to observe that she did not catch it upon this occasion; but the dead body of the infant was a horrid sight, being all covered with the pustules, a manifest sign that it died of the disease before it came into the world.

From such examples, Dr. Jenner* concludes that the small-pox virus may affect the human frame, even to its inmost recesses, although apparently secured from its effects, and yet give no evidence of its presence, by exciting any perceptible disorder.

In 1749, Sir William Watson† published the following case:

A woman, far advanced in pregnancy, who had labored under the small-pox, a long time before, who, during this pregnancy, performed the duty of a nurse to her servant in the natural small-pox; and in a month after this attendance, was brought to bed of a child that had about forty scars upon its body, like those from the small-pox. This child (a girl), and her brother, were afterwards inoculated at the same time. The brother had inflammation of the parts inoculated, eruptive fever, and eruptions, as in the most ordinary small-pox; and the girl, born with the pits on her skin, had inflammation and suppuration in the parts inoculated, in the same manner as her brother, and a general indisposition, as in the undoubted cases of small-pox, but no eruptions.

*NOTE.—Medico-Chirurgical Transactions, vol. 1, London, 1805, Third Ed., pp. 271–277.

†NOTE.—Philosophical Transactions, vol. xlvi., p. 239.

Sir William Watson concluded that this girl had gone through the small-pox before her birth; and Camper and Van Swieten coincided with him in this conclusion.

It was established, by actual experiment, that pregnant women were not fit subjects for inoculation, as the small-pox often caused miscarriage, and what is remarkable, when the disease proved mild to the mother, it was sometimes fatal to the child.

The preceding facts, illustrating the communication of small-pox to the foetus in utero, might be greatly enlarged by various other observations, as those of Bartholini, 1657; Mr. Durham, 1713, (Phil. Trans., vol. xxviii., p. 165); Dr. Mortimer, 1749, (Phil. Trans., vol. xlvi., p. 233); Dr. Mead, 1747, in his Treatise on Variolis; Dr. Rosen Von Rosenstein, 1756; Baron Vinedale, 1766, Treatise on Inoculation; Mr. Wastall, 1776, (Phil. Trans., vol. lxx., p 128): Dr. Wright, 1781, (Phil. Trans., vol. lxxi., p. 372); Dr. Bland, 1781, (London Medical Journal, vol. ii., p. 205); Mr. Roberts, 1784, (Medical Journal, vol. v , p. 399); Dr. Haggarth; Dr. Woodville, Dr. Ford; Mr. Jones; Dr. Husack; Dr. George Pearson, 1794, (Medical Commentaries, by Andrew Duncan, vol. ix., Edinburgh, 1795, p. 213); Dr. George Pearson gives some important cases of equal interest with those recorded above; Alexander Munro, (Observations on the Different Kinds of Small-Pox, Edinburgh, 1818, p. 621).

We have thus brought together a number of important observations, scattered through various medical and scientific periodicals, bearing upon the transmission of the poison of small-pox, through systems entirely protected from its influence and demonstrating the existence of the poison, in a potential active state, as shown by the excitation of genuine small-pox in the foetus, resting in the womb of the mother, protected by previous inoculation, vaccination and small-pox, *in the hope that the attention of physicians may be directed to analogous inquiries in* YELLOW FEVER.

If, therefore, the poison of Yellow Fever is capable of affecting the foetus in utero, in an analogous manner to the poison of small-pox, we may arrive at the following conclusions, which, if more extended investigation should clearly establish, will explain one mode in which the natives of those cities and localities, as New Orleans, where Yellow Fever often prevails, obtain an immunity from its attacks:

1st. The poison of Yellow Fever is capable of affecting the foetus in utero.

2d. It is probable that the Yellow Fever poison is capable of affecting the foetus in utero, without inducing the disease in the mother, who has had the disease at some period preceding pregnancy.

3d. It is thus rendered probable that a certain number of natives are in this manner rendered insusceptible to the action of the Yellow Fever poison after birth.

No. 493 *St. Charles Street, New Orleans, La., June 2d,* 1873.

ART. IV.—*Pathologico-Therapeutic Studies—"Catarrhal Pneumonia," Syn. Broncho, Vesicular, Lobular, Disseminated, Insulated Pneumonia, &c.* By J. F. M. GEDDINGS, M. D., of Charleston, S. C. [*Continued from page* 15.]

Considered from a pathologico-anatomical standpoint, we thus see that catarrhal pneumonia presents characters differing essentially from those of the croupous variety of the disease. These differences are, briefly: First. The absence of fibrinous exudation in the alveoles and fine bronchi. Second. The preponderating cell proliferation in the affected alveoles and bronchi. Third. The disseminated, discrete occurrence and location of the inflamed parts. Fourth. The original location and especially the manner in which the inflammation extends. Fifth. The dependence of the anatomical lesion on antecedent catarrhal inflammation of the bronchial mucous membrane, or on atelectasis originating from this cause.

All of these important anatomical differences necessitate the separation, at least anatomically, of catarrhal pneumonia from other forms; and, as I proceed, I will endeavor to show that no less distinct clinical characteristics can be demonstrated.

Etiology and Pathogeny.—That catarrhal pneumonia is of frequent occurrence during the earliest years of childhood hardly admits of doubt. With regard to the relative frequency compared with the croupous form during this period of life, we have on the authority of Ziemssen (op. cit., vii) 299 cases of pneumonia of both forms, 201 of croupous against 98 of the catarrhal variety. Of 94 cases reported by Steffen (op. cit., i, 254), 72 were of the catarrhal form. These together give 393 cases of pneumonia, 223 croupous, and 170 catarrhal, or 56.74 per cent. croupous, 43.25 per cent. catarrhal. These results do not correspond with my own experience, for whilst I have carefully studied clinically a large number of cases of catarrhal pneumonia occurring in private practice during the past seven years, in that period not a single case of the croupous form has been observed in a child under three years of age. In fact were I to rely exclusively on the results of my own observations, I would be inclined to consider croupous pneumonia an almost unknown disease during the first three years of life.

All the recorded observations to which I have had access, as well as my individual experience, indicate that catarrhal pneumonia is almost exclusively a disease of early childhood. Faye indicates of very young childdren; Reilliet and Barthez the first five years of childhood; Steffen (op. cit., i, 253) gives 72 cases, in first three years of life 52, in second 14, in third 6. Thus we have 72.22 per cent. in the first, 19.44 per cent. in the second, and 8.33 per cent. in the third triennium of life. Steiner (Prager Vrestalgatus xix, 1862)

ɜerved that the greater majority of cases occurred during first ɜnnium. Forster observed the same. My own experience in-ɜates one and a half to four years as the period of life most pre-posing to the disease.

Sex.—I have failed to observe any difference in the relative quency of catarrhal pneumonia in the two sexes. Reilliet and rthez make the same observation. Of 110 cases reported by inner, 65 were boys and 45 girls. Steffens' 72 cases gave 42 ɣs and 30 girls. It would appear from the results of these latter ɜervations, that boys are slightly more predisposed than girls to ɪtract the disease.

Season.—Reilliet and Barthez did not observe that catarrhal eumonia was of more frequent occurrence at one season of the ar than at another. Steffen, on the contrary, found that of his 72 ɜes, 47 occurred during the colder months of the year, from ɔvember to the end of March. Bednar (Die Krankheiter der ɜugebrenen is Sänghinge) found that of 154 cases, 51 occurred ring the first, 31 in the second, 26 in the third and 33 in the ɪrth quarter of the year. From these results we are justified in nsidering that season exercises an important, but indirect causal fluence; indirect, inasmuch as catarrhal pneumonia bears a con-ɪnt relation to the frequency of other catarrhal affections of the ɜpiratory organs, which are most prevalent during the colder ɔnths.

Food, &c.—That catarrhal pneumonia attacks by predelection, ildren who are reared in poverty, and are badly fed, does not mit of doubt. Hence its frequent occurrence in foundling and ɪer hospitals for children. Classifying his cases as good, medium l badly nourished, Steffen (op. cit. i, 254) obtained the following ults:

od nourishment	18
dium nourishment	8
d nourishment	46
Total	72

Antecedent Disease.—Catarrhal pneumonia, according to almost authors, never occurs as a primary affection. The diseases ɹich most frequently give rise to it, are those attended with ɜarrh of the bronchial mucous membrane. Among these are ɔrbilli, pertussis, influenza, ileo-typhus, &c., rachitis and chronic ɓeric catarrh, &c. Steiner arranges the antecedent diseases of O cases of catarrhal pneumonia, in the order of frequency, as lows: Rachitis, Rachitis with tuberculosis of mesenteric glands, ɔrophy, Tuberculosis of mesenteric glands, Morbilli, Scarlatina, ariola, Dysenteria, Caries, Noma, Heart Disease, Meningitis, Am-ɜstio. Steffen (op. cit. i, 254) states that he has never seen this ɔm of pneumonia, in heretofore perfectly healthy children, but

constantly found that the affection was preceded by other diseases. Ziemssen makes the same observation. The results of the observations of of the two taken together may be tabulated as follows:

Diseases.	*Steffen.*	*Ziemssen.*
Bronchitis	33	32
Tussis convulsiva	8	23
Morbilli	6	43
Bronchial and intestinal catarrh	3	
Variola	2	
Atrophy	2	
Scrofulosis	2	
Morbilli, noma genital, pleuritis	2	
Tussis convul., with mobilli	2	
Bronchitis, with hydrocepalus chron.	1	
Bronchitis and Rachitis	1	
Pleuritis	1	
Pleuritis and meningitis	1	
Intestinal catarrh	1	
Croup of larynx and Broncitis	1	
Catarrh of bronch and intest	1	
Tuberculosis pulmonum	1	
Emphysema, tabes mesent et intest	1	
Pleuritis and Hypertropia cordis	2	
	72	98

Epidemic Influence.—There are no grounds for the belief that catarrhal pneumonia prevails as a marked epidemic, except as a participatory phenomenon of those epidemic diseases in which catarrh of the bronchial mucous membrane is an essential feature, such as Morbilli, Pertussis, Influenza, &c., although the contrary has been asserted by Reilliet and Barthez.

Constitutional Individuality.—Independent of the foregoing predisposing causes, that is diseases of the bronchial mucous membrane, especially catarrh, there can be no doubt that individual peculiarities (idiosyncrasies) exercise a manifest influence in the production of catarrhal pneumonia. More than once I have observed in families that certain children manifested a vulnerability of the pulmonary parenchyma, rendering them liable to catarrhal pneumonia, whenever attacked by an ordinary bronchial catarrh, whilst other members of the same family exhibited no such tendency to an extension of the catarrhal process to the bronchioles and air cells. Steffen (i. 255) has observed the same.

Bad Exterior Relations.—Another class of causes predisposing to disease of the bronchial mucous membrane and consequently to catarrhal pneumonia, may be stated to be bad or unhealthy surroundings, as small, damp, crowded and ill-ventillated apartments such as are usually occupied by the poor in large cities and the

over-crowded dormitories of foundling and other institutions for children, where great regard is paid to economy and but little to the comfort and health of the unfortunate inmates. The quantity and quality of the food being insufficient, by inducing a permanent deterioration of health, must necessarily predispose to the development of disease, and this, added to the influence of damp, impure air, tends naturally to the production of disease of the bronchi and pulmonary alveoles.

Atmospheric Influences.—The acknowledged influence of atmospheric vicissitudes in the production of catarrhal affections generally, renders it probable that they may, under certain conditions, act as etiological moments directly provocative of catarrhal pneumonia; but we are too ignorant of the causal connection between what is termed "taking cold" and catarrhal affections generally to explain how and wherefore the effects are produced.

Such being the principal predisposing causes of catarrhal pneumonia, I may in the next place endeavor to explain how the disease is developed by the operation of the proximate etiological moment. Taking the anatomical lesions, found after death, and clinical observation for our guides, we find that the catarrhal inflammation of the smaller bronchi is the sole and essential proximate cause of our disease. The manner in which catarrhal pneumonia is induced by the operation of this cause is twofold:

First. A catarrh may extend from the larynx, trachea and large bronchi to the smaller; or a bronchitis may originate in the bronchioles without implication of the larger tubes. In nurslings the extension of the catarrh from the larger to the smaller tubes is more frequent than the reverse (F. Weber). From the capillary bronchial tubes the inflammatory process is transferred to the pulmonary alveoles. As a consequence of this extension of initiative action, there is an enormous cell growth within the alveoles, until finally their cavities are completely filled. Whether this accumulation of cells be due to vegetation or proliferation of the alveoles, or to migrated white blood corpuscles (Cohnheim) cannot, in the present state of our knowledge, be exactly determined. The latter hypothesis is the more plausible. Coincidently with this accumulation of cells within the alveoles, the surrounding interalveolar and interlobular connective tissue becomes involved. It becomes infiltrated, swollen, and is the seat of abnormal vegetation of connective tissue corpuscles. Here the process may stop and resolution come to pass, after a longer or shorter duration. The morphological elements within the alveoles undergo fatty metmorphosis, are converted into granular and fatty detritus, which is removed by expectoration or by absorption, and the epithelium of the alveoles being regenerated, the integrity of the alveoles is restored. The infiltrated and swollen connective tissue coincidently returns to its normal condition, provided the process has not endured for a length of time, *Restitutio ad integrium* takes place. In other

cases, and these unfortunately not rare, the walls of the alveoles continue to form new cells, the interstitial connective tissue becomes liquified, pus is produced in quantity, which, by encroaching on the alveoles, finally leads to their destruction, and the affected lobules become converted into small abcesses, usually discrete, but which, under certain conditions, run together, giving rise to cavities, filled with a puriform liquid. These abcesses, especially the smaller, may open into the bronchial tubes, or through the pulmonary pleura, into the thoracic cavity, the result being a rapidly developed pyopneumothorax, or the contents of the alveoles may be converted into cheesy masses (tyrosis) so-called tubercular infiltration, which eventually leads to destruction of the alveoles, with implication of the interstitial connective tissue and the formation of tubercular excavations, constituting what we recognize as "Phthisis pulmonalis simplex," of young children.

Second. The catarrhal pneumonia is developed as a result of antecedent capillary bronchitis, with or without implication of the large tubes. The result of this antecedent capillary bronchitis, in many cases, is an obturation or complete obstruction of a larger or smaller number of bronchioles. The obstruction of the bronchioles in those cases may be due to several causes. Zeimssen attributes it, in protracted cases, to the accumulation of the bronchial secretion. Bartels, on the contrary, assumes that the obturation is due a spastic contraction of the bronchial muscles, together with the notable swelling of the bronchiolic mucous membrane. Whilst it may be admitted, with Zeimssen, that in protracted cases, an accumulation of secretion in the bronchioles is the most important factor in causing obstruction, the spastic contraction of the bronchial muscles, as advanced by Bartels, must be considered, to say the least, as extremely problematical. To me it seems more probable that the muscular fibres, beneath an intensely inflamed, tumefied and infiltrated mucous membrane, are more likely to be paralized, than spasmodically contracted. The anatomical lesion, viz., the small amount of secretion found in the bronchioles, on which he bases his hypothesis, does not appear to authorize the negation of the proposition, that the tumefaction and small quantity of viscid secretion found, are alone efficient factors, in the production of obturation of the bronchioles. The explanation of the process, given by Steffen, (op. cit., i., 258), seems to be entirely satisfactory, as elucidating the mechanism, by which obstruction of the bronchioles is brought about. There is at first intense hyperæmia, redress and tumefaction of the bronchiolic mucous membrane, soon there is poured out a vitreous, sticky exudation, which may be in extremely small quantity, but which, owing to its physical properties, is sufficient to obstruct the bronchioles, naturally of fine calibre in children, and still more narrowed by swelling, &c. That the bronchial muscular fibres here play an essential part, as already stated, is doubtful. After the obstruction has persisted for some time, the

hyperæmia and swelling of the membrane diminishes, and the affected tubes are found cylindrically ectutic. Coincidently with the diminution of the hyperæmia, there is a notable increase in the quantity of the secretion. This accumulating in the dilated portions of the tubes, aided no doubt by the paralytic condition of the bronchial muscles and the narrow outlets, becomes the principal factor in the production of the obturation of the affected bronchioles. The bronchioles having become obstructed, the next step in the process is the development of atelectasis of the corresponding lobules. This condition is probably brought about in the following manner: The ingress of air through the obstructed tubes, to the corresponding alveoles, being prevented, that which is confined within, is removed by absorption, by the capillaries of the alveolar parietes, so soon as the air within the alveoles is removed, they collapse. By the removal of air, and collapse of the alveoles, the motive power of the secretion, from behind, is in abeyance diminished still further by the absence of the ciliated epithelium, normally present in the tubes, and by the paralytic condition of the bronchial muscles.

Another possible condition, pointed out by Fauvel, and also by Ziemssen, may obtain, viz., that during the expectory effort of violent cough, or the succeeding inspiration, the secretion is forced or drawn from the tubes into the alveoles, and completely fills them. That such does occur in certain cases, especially in whooping cough, cannot be doubted.

The alveoles being collapsed and entirely empty of air, present the characters of acquired atelectasis, unless subsequently filled by propulsion of secretion from the tubules.

In consequence of the lateral pressure within the alveoles being removed, as a natural result of the suspended respiration in the affected lobules, we have as the next step in the process, an overfilling of the alveolar capillaries, or, in other words, the development of a hyperæmic vacuo. The consequence of this hyperæmia, which is not confined to the alveolar vessels, but involves also those of the surrounding connective tissue, is the abundant production of morphological elements (cells) within the alveoles and parenchymatous inflammation of the inter alveolar tissue. The cells within the alveoles soon undergo retrogressive destruction and cointidently the surrounding connective tissue is the seat of active proliferation and formation of new elements. "Gradually, the latter process becomes the most important element, the alveoles are obliterated, abundant formation of young connective tissue takes place, which subsequently contracts, giving rise to permanent dilation of the bronchi, diminution of the lung and retraction of the affected parts." (Steffen, i, 259.)

The pathogeny of the vesicular and interlobular emphysema, which is found as an almost constant lesion of the lungs of those dying of catarrhal pneumonia, may be readily explained. The

assumption that it is the result of forced inspiration overcoming the obstacle to ingress of air, which obstacle cannot be removed by the subsequent expiration, as maintained by Rokitansky and others, does not seem to be in accordance with physical laws, or the ordinary seat of the lesion. The theory of Mendelsohn appears to be more in accordance with the phenomena observed during life and the seat of the lesion discovered after death. During the forced expiration accompanying the paroxysms of cough, the air within the lungs is brought under abnormal pressure. As a result of this abnormal tension of the air within the lungs, the alveoles situated in those portions of the thorax, where the walls are least compressed by the action of the expiratory muscles, viz., the super-clavicular and the sub-clavicular regions as low as fourth rib become dilated beyond their normal capacity. These portions of the thorax being but little influenced by the action of the expiratory muscles, must necessarily offer less resistance to the distending force than others, which are energetically compressed during each paroxysm of cough. With such recurrence of cough, the glottis being contracted, offering increased resistance to the exit of air, this is of necesssity forced into those portions of the lungs, least compressed by the spasmodic action of the expiratory muscles. Hence the abnormal dilation of the alveoles in the superior-anterior portions of the lungs. The persistent, or often repeated abnormal dilatation of alveoles finally leads to impairment of the elasticty and nutritive changes in the walls, which eventually have for their result the development of true emphysema (*E. Substantiorum*) as a prolonged if not permanent lesion.

The vicariant emphysema of the lower lobes, occurring in circumscribed spots, is the result of compensatory dilatation of the alveoles surrounding the infiltrated and consolidated lobules involved in the pneumonic process.

The pathogeny of the lesions due to disturbances of the circulatory apparatus need not be discussed at length. The obstacle which the pulmonary lesions offer to the lesser circulation must be evident, as a result of the diffused collapse of the affected lobules, there is as a necessary condition, hyperæmia and stasis, added to this collateral fluxion to the unaffected lobules and to the mucous membrane of the corresponding bronchioles and bronchi. "Parapasu" with the diminution of the respiratory surface, incidental to the pneumonic consolidation, the obstacles to the circulation increase. The repletion of the right heart, (from obstacle to emptying,) necessarily diminishes the quantity of blood received by the left. The tension of the blood in the aortic system is necessarily notably diminished, hence the smallness and softness of the pulse, so frequently met with in cases of extensively diffused catarrhal pneumonia. To such a degree is this tension of the blood in aortic system diminished, that, according to Ziemssen, "the radial artery, on account of the weakness of the pulse wave, is unserviceable for

ermining the frequency of the pulse, and for this purpose the ɔulse of the heart must be taken as a criterion to establish the nt.

n these cases, in which, from failing power of the heart, result- from the protracted fever and incomplete decarbonization of the ɔd, the right ventricle cannot overcome the resistance to the cir- ɪtion by compensatory activity, there is early stagnation in the temic veins, giving rise to repletion of those of the brain, with r carbonized blood, causing apathy, somnolence, coma, &c., to tric and intestinal catarrh, to passive hyperæmia of the kidneys,

Effusions into the great serous cavities and the subcutaneous nective tissue, occur, according to Ziemssen, "only in very pro- ɜted cases, such as result from whooping cough, and even in these ɜs, comparatively seldom."

(To be continued.)

T. V.-- *Concerning Southern Medicine; its Duties and Respon- ibility.* By MARK REYNOLDS, M. D., Statesburg, S. C.

t might be asserted, with every degree of confidence, that there but few, if any, members of the medical profession within the ders of the State who have reflected upon the void created in medical record and literature of our section of country by the pension of a legitimate and *appropriate* medium for the commu- ation of their cases, together with their views upon the subject lisease, its causes and treatment, as well as upon that of medical ics, who will not regard the present movement for the re-estab- ɪment of *The Charleston Medical Journal* as a most laudable and nmendable effort to meet a pressing want and exigency of our ɪes; and as also the harbinger of a brighter future for the great erests and well being of the profession. Such considerations, it confidently hoped, will bring the whole profession of this State to the aid of so necessary an undertaking.

To practitioners at a distance from the great centres—in districts ɪere there can exist but little opportunity for exchange of views— ɪere community of opinion and concert of action as regards points pertaining to the multifarious interests of the profession are well ɜh impracticable—the revival of an appropriate and legitimate hicle for the dissemination of *associate* views and opinions will ove little short of a boon.

Without such repository for individual experiences (and individ- l observation with reflection must of necessity constitute the sis of all knowledge, and form the true, indeed the only point : an untrammeled and philosophical departure in such a field of ɔor as ours), how much may be lost to the high and elevated in-

terests of the profession in our own State? Many of us feel that the temporary suspension of such a medium has created a deplorable hiatus in our medical record, which cannot now be bridged over. Such a journal, to some extent devoted to the purposes indicated, may contribute largely to meet what would appear to be the want of Southern medicine at this juncture; and this can be summed up in one most vital requisition, viz., a clear record and succinct classification of *facts*, derived from careful and well directed observation upon *our own* theatre of research.

Vague and unstable theories upon the subject of treatment, most of them the product of another latitude, and eliminated in a great measure by the very restless spirit of the age in which we live, ought not, we submit, be permitted to modify to any considerable extent Southern practice, but should rather be antagonized by *fixed* and *settled* views, satisfactory to ourselves—that is, by opinions the result of our own experience, and conditioned by such experience as to the treatment of disease in this region. It is not, we would suppose, asking too much to be considered the best judges of it, in both its etiological and pathalogical aspect.

When we reflect upon the different, dissimilar and irreconcilable fancies every day adopted and passing into actual practice before our eyes—the new lights looming up from a distance, which are not permitted even to guide us tentatively, as it were, but to direct us, as the latest and best illuminations—when we see the vacillating and fluctuating modes of procedure, which dependance upon experiences foreign to ourselves, necessarily entails—and all governed very much by the small laws and caprices which preside over the fashions of the day, we may well ask for some record and exposition, at this juncture, of the opinions of men at the South of experience—something that would, to some extent, at least, be an authoritative utterance upon the merits of what really might be termed the two antagonistic schools of opinion throughout the country. It has been with no small degree of gratification that we have seen, in contiguous States, men of high character and large experience in the profession struggling against this tide of new doctrines, which is sweeping down upon us, threatening to obliterate the old charts and landmarks left for our guidance by those eminent men of our own section, who labored before us, and who accumulated their experience upon the same fields on which we are called upon to discharge our duties.

The time has now arrived when some effort should be made here to effect a change of this manner (it cannot be termed system) of treatment—that as regards the management of Southern diseases, and diseased action generally, modified by climatic influences, some universally recognized principals of treatment should be established. The great question therefore would seem to be whether we are to accept the dicta emanating from a small group of erratic thinkers, which have sorely vexed the staid, phylosophical thought

Great Britain, and brought under their influence, to a great extent, the teaching of Northern Schools—or whether we are to hold to the great principles bequeathed to us by those whose life-long experiences were garnered up upon this arena, and where all that is really valuable to us to-day was secured. Are the principles of treatment derived from experience of such character to be ignored—cast aside as effete, like the "dead issues" of the political world, because they differ in toto from the fancies of coteries representing a type of radical medicine? Is the theory, if carried to its logical and practical outfull, which is to bring all cases of diseased action, irritative and even inflammatory, under the system of sustination, alimentation and stimulation to be tolerated in this latitude? Is the lancet (we allude of course to a discrete use of it) to be ruled out? And are the various preparations of mercury to have no more a place in Southern pharmacopœias? These are questions of grave import to all of us, and they are suggestive of no exaggeration as respects the present indefensible and anomalous methods of procedure in some quarters.

It will scarcely be sufficient for those among us who may be disposed to follow in the wake of this new school, the burden of whose teaching is, alimentation, tonics and stimulants, to adduce what they term their *cures* under such system, and marshal them for review before us; we know that in many, very many cases, the tendency of the vital and recuperative forces are entirely equal to the throwing off of disease, and especially so in fever—that it is difficult by any course, we might say short of poisoning, to suspend or obstruct the energetic processes set up for *recovery*—that such cases, running a course free from acute inflammatory complications do well with very little treatment—not unfrequently without treatment, and are capable of resisting even crude and injudicious treatment—as, for instance, a course which is most incorrectly termed a system of alimentation. Now, as to alimentation, (a most unfortunate selection of nomenclature, by the way, for the advocates of the so-called "system,") the bare possibility of alimentation would imply, necessarily, integrity of action on the part of the organs of assimilation—a healthy condition of the gastric mucous membranes, together with their secretions and those of other organs, and all presided over by healthy, nervous action. What then is the condition of these essential and indispensable factors in cases of miasmatic disease—for instance, where epigastric oppression and distress are among the most constant and obvious symptoms? But let us assume the existence of a more normal state of digestion and assimilation, which we find often connected with cases of circumscribed, local, but acute inflammation. We will instance iritis; here the effort at what is called sustination, &c., becomes intelligible—digestion goes on, the blood-making processes rendered more active, will thus tend to promote resolution—arrest inflammatory action—remove laymph deposits, if such have taken place—will this mode of management be safer,

more apt to protect the ciliary body, choroid coat and retina—than topical blood-letting, general, if called for, and Mercury and Belladonna?

It is not by any means uncommon now-a-days to meet with pneumonic inflammation of the most active and destructive character, presenting somewhat the livery of typhoid, (an aspect not unfrequently the product of the very intensity of inflammation,) treated throughout with stimulants, supplemented not unlikely with occasional doses of veratrum vir, and, should the pernicious effects of this drug become too pronounced, then the Gelseminum has to perform its role.

Can we be surprised, when we contemplate where we are drifting to under the lead of this new school of ideas, at the energetic utterances of a distinguished professor in one of our neighboring colleges, when addressing a medical society, he exclaims (if such practice be upheld and indorsed by the opinion of the age) he "would strike the flag, and turn his patients over to the butcher, the baker and distiller?" And this is called progress! And all who oppose the movement are very likely to be told that they are sadly behind; that they are not abreast with advanced ideas and the new habits of thought on such subjects; that they are hostile to improvement and wrapped in an atmosphere of "antiquated foggyism." Strange delusion by which these knights errant, who ride about the world of medicine, startling common sense with the shibboleths of conflicting creeds, are exercised! They will not see in the very heat and vigor of the charge that they are mistaking *change*, and the spasmodic grasping of new points of departure for *progress*, solid advancement, and assured attainment.

It is gratifying to contemplate that so far such doctrines have not made much advancement among us, and we will hope that they are exotics which will not strike any deep roots in Southern soil; but there is just enough of the growth beginning to appear to induce a guarded watchfulness, so as to confine it to regions where it seems to be indigenous and better perhaps adapted for its home.

For the repression of such views of treatment we would most earnestly invoke the aid of the leading minds of our profession throughout the State. Routed they must be, or they will attain some force. They have already been the cause of alcoholic stimulation becoming one of the principal elements of treatment in all affections, regardless entirely of pathological conditions. Let us hope that the day is not far distant when such practice will be spoken of but to be condemned. Nor will such a denouement remove alcohol and its preparations from the list of useful agents. It is indispensable for the production of *temporary* good—to enable us, under certain conditions, to sustain a failing heart and brain, and to tide over, as it were, alarming temporary peril; but as a *remedial* agent, entering into *sustained* treatment, it can have no place, and after a little will have no hold on professional mind. To-day when

ɜ look out upon society, especially in the great centres, we see
ough to induce a condemnation of such practice in the numerous
stances of habitual inebriation ; and a spectacle so sad, is still more
tensified by a contemplation of the fact that the female portion
such communities, in the higher walks of life, is more largely
volved.

These views, thrown off in this hastily written article on a great
bject, may to many seem desultory and detached; they may be
ıenable to such objection; but such was unavoidable from the
ıry nature of the subject. They are meant simply to be sug-
ıstive. They have been, however, conceived and expressed in no
ıkind spirit of carping criticism, but to aid, and to induce others
aid, in the restoration of a more conservative system, which
ould present less of incongruity and antagonism, and one embrac-
g recognized principles, which may still allow enough play for in-
vidual judgment and sagacity in their application; but when one
ass of practitioners, in cases of the same type and character of dis-
ıed action deplete, another stimulate, at what conclusions may
ɔt an intelligent public at length arrive?

The age through which we are passing is one of unprecedented
ıental activity; a severe analysis is being applied to all systems,
olitical, philosophical and theological. Ours cannot escape; it
ill be interrogated as never was the case before. Let us, in our
ay at least, divest it, as far as may be, of glaring inconsistencies,
bsurd contrarieties, and purilities, and surround it with all the
ds which a generally received and conservative code of principles
ay afford.

RT. VI.—*The Close Affinity of Epidemic Cerebro-Spinal Meningitis and Erysipelas.* By BENJAMIN RHETT, M. D., Abbeville, S. C.

"The object of prosecuting the anatomy of disease is to institute comparison between the known appearances of health, and an tered appearance of the parts, as evidence of disease."

With equal truth it may be said that by comparing the different ɹorbid appearances resulting from different diseases, we may in-itute a comparison among diseases, grouping together those ssentially cognate, and separating those, which on superficial in-ɔection appearing alike, yet close scrutiny proves to be widely istinct.

As late as 1868 and 1869. the disease known as "Epidemic Cere-ro-Spinal Meningitis," was considered by high authority, (Mur-hison, Upham and others) to be a variety of Typhus, and received om these authorities the names of "Spotted Typhus," "Spotted ever," "Cerebro-Spinal Typhus," "Febris Nigra," &c. The blood

deterioration, as shown by the hæmic eruptions, the prostration of the vital forces, and the pneumonic complication playing so important a part in the two diseases, induced these observers to regard them as identical, meningitis being undoubtedly at times complicated by true typhus.

The reviewer (Jan. No. American Journal Medical Sciences for 1868) of Professor Stillé's monograph upon "Cerebro-Spinal Meningitis," uses the following language: "Under the head of diagnosis the differential characters which distinguish the disease from typhus fever are fully presented: and a candid examination of these characters must, we think, satisfy all minds not committed to a different conviction, of the error of regarding the disease as in any way allied to typhus, albeit the latter view has the sanction of high authority."

Coinciding with this view, as expressed by Professor Stillé, of the disease being in no way allied to typhus, are Fourdes of Strasbourg, Neimeyer of Germany, Stokes of England, Gordon of Ireland, and Clymer of the United States, all clinically familiar with the disease.

I have carefully examined the limited number of authorities that are accessible to me, to see if any of them pointed out the close affinity between epidemic meningitis and erysipelas, and although the former is said to be attended by erythema and complicated by erysipelas, none appear to recognize either relationship or identity; and yet the likeness is as close, if not closer, between these two diseases than between erysipelas and puerperal (epidemic) fever, and we have good authority for suspecting erysipelas and epidemic puerperal fever to have the same œtic agent.

It is the experience of many accouchers that patients in childbed will, when exposed to the contagion of erysipelas, contract puerperal fever, and that the lochia of a puerperal fever patient can cause erysipelas. "Indeed, some forms of puerperal fever seem to be identical with erysipelas." (Aitken.)

The serous membranes of the abdominal viscera, brain and lungs are not unfrequently involved in idiopathic erysipelatous inflammation.

We are so ignorant of the œtic poisons of epidemic diseases, and of the laws that shape their course, in electing different parts or organs, in different epidemics or in the same epidemic, and that so change or modify the expression of disease, as to render doubtful the identity of the cases that fall under observation. Professor Stillé says of cebro-spinal meningitis: "The inflammatory element and the septic element, are both necessary to constitute the disease; either may be in excess and overshadow the other, and it is this diversity in its physiognomy which has led to such opposite doctrines in regard to its nature and its nosological affinities."

Having witnessed an epidemic of cerebro-spinal meningitis in 1864 upon the coast of South Carolina, and having attended a few

oradic cases within the last two months, my attention was so ttracted by the apparent similarity of the disease to erysipelas of ıe arachnoid, that I based my treatment upon this idea, making se of muriated tinc. of iron for its well known control over erypelatous inflammation. My subsequent examination of this matr has served to strengthen my conviction that if the two disıses do not acknowledge a common causative agent, their affinity so close as to furnish useful hints for treatment.

Both diseases, in their fulminant or malignant form, destroy life crushing out the vitality, and leave little trace behind them, ther in outward symptoms or morbid lesions. In these cases the ptic element" predominates, and affords small ground of comrison. This malignancy is however common to both diseases.

"It is within the experience of surgeons that patients will per- a few days after operations. When erysipelas prevails in a spital, without any external sign of even erythema, they die of form of internal erysipelas."

It is also within the experience of physicians that forms of eumonia will result from communication with erysipelatous ses, and that such forms of pneumonia may convey erysipelas to ose having open sores or wounds. (Campbell de Morgan.)

I propose to show from the more commonly recognized features the two diseases, and by extracts from approved authority, that e symptoms, pathogeny and morbid alteration of textures pronce the two diseases as closely allied, if not identical, in origin, d that the same principles of treatment have been found applible to both by those not recognizing any affinity between them.

making this comparison we must of course take those instances which the inflammatory element preponderates, and that have ne in their progress to produce morbid products.

The malaise, chill, headache, muscular pains, the tongue at first ated with creamy fur, and becoming in time brown and dry, the rdes upon the teeth and lips are common to all pyrexias, espeally the exanthemata; also, the delirium, sometimes noisy, somenes muttering, and the injected eye are present in all inflammary attacks of the brain or its membranes.

Sore throat and enlargement of the lymphatic glands of the ck are also common to scarlatina, rubeola, as well as to erysipes and meningitis.

Professor Aitken says: "Frank has pointed out a symptom he nsiders diagnostic (of erysipelas), namely: that whenever a pant has exhibited for twenty-four or forty-eight hours an intense brile movement, attended with pain, swelling and tenderness of e lymphatic glands of the neck, he does not hesitate to announce e approaching development of erysipelas."

Dr. Clymer mentions that this enlargement and tenderness of the mphatic glands is an attendant symptom of meningitis; he also eaks of sore throat as attendant upon it. Tanner mentions "sore

throat" as "an early and frequent accompanyment of it" (erysipelas). We know both enlargement and tenderness of cervical glands and sore throat to be present in scarlatina and measles, as well as in the above diseases. The exanthemata are often complicated by pneumonia, but, if I mistake not, there is claimed to be something peculiar in the infiltration of ill conditioned pus within the ramifications of the blood-vessels in the pneumonia attendant upon erysipelas and meningitis, showing that the lining coats of the vessels themselves have been the parts involved in the inflammation Both diseases at times involve the abdominal viscera, causing abdominal pains, nausea, vomiting, and inflammatory attacks of the kidneys with albuminous urine.

Tanner speaks of "nausea, vomiting and disturbance of cerebral functions" in erysipelas.

Clymer mentions "nausea, vomiting and abdominal pains" as attendant upon meningitis. He also mentions an eruption like erythema and urticaria, and a vesicular or herpetic eruption. It is a question how nearly related erythema is to erysipelas, and we know that vesicles form upon the skin in erysipelas.

These are the outward and visible signs attendant upon the two diseases, and complicating their course. Let us probe the matter a little deeper. First, let us enquire if there are any structures or organs that these diseases in common select by preference to expend their force upon, and, such being the case, if the morbid products are the same in both?

Professor Aitken says: "Erysipelas is especially apt to become complicated with visceral inflammations of the membranous structures of the brain, lungs, bronchi, and the gastro intestinal mucous membrane." "Erysipelas of the serous membranes is chiefly seen in the arachnoid and peritoneum."

Dr. Tanner says: "Erysipelas may prove fatal by extension of inflammation to the brain or its membranes—giving rise to effusion and coma."

Erichsen, speaking of erysipelatous arachnitis, says: "The inflamed arachnoid is found covered with a layer of opaque puriform lymph of a greenish yellow color and slimy consistence; the arachnoid and pia mater are found greatly injected with blood, forming a close red network of vessels over the surface of the brain, the substance of which is usually injected. The ventricles being distended with a reddish serum. The pus resulting from erysipelatous inflammation is generally described as thin and ill-conditioned; and, where the serous membranes are involved, as sero-pus-serum, with flaky particles of lymph floating in it—or, sanious, thin, &c.

Let us now examine into the morbid appearances left by Cerebro-Spinal Meningitis.

Upham describes them as follows: "Semi-organized lymph on the base of the brain, and medulla oblongata." "The cerebro-spinal fluid is much increased, of a yellowish or milky hue." The exuda-

tions seen after death are, "pseudo-membranous: in other cases as *soft* and butter like."

Burdon Sanderson found "in the subarachnoid space sero-purulent *fluid*, present also in the ventricles."

"When death happened, two or three days after the invasion, opalescence of the upper surface of the cerebrum, seemingly in the subarachnoid fluid, an abundant vascularity of the membranes of the brain, chiefly of the pia mater, a large increase of serum in the subarachnoid space, and in the ventricles, clear or turbid, and mixed with floculi of lymph; also with greenish pus."—(Upham.)

Surgeon Woodward, U. S. A., found "serum, sero-pus and yellow lymph—especially in the ventricles, base of the brain, and upper part of the spinal canal."

The parallel is equally striking when the effect of the two diseases upon the blood is examined into.

Aitken describes the blood of erysipelas "as fluid and thin, pitchy and dark, staining the inner surfaces of the large vessels by its decomposition," "showing the veins by transudation of the colored fluid through their coats."

Tourdes and Stillé describe the blood in meningitis as being "dark and fluid in the briefest cases."

Both diseases are described as being specially fatal to young children, drunkards and debilitated persons.

They both prevail at all seasons of the year, but are more prevalent in fall, winter and spring.

The use of the lancet is detrimental in both diseases, and tonic treatment the most successful.

In maintaining the close affinity of the two diseases, candor compels me to acknowledge that the contagiousness of erysipelas is much more clearly made out than that of meningitis; that hæmic eruptions are more common in meningitis than in erysipelas, and that erysipelas attacks the old more frequently than meningitis does. Nor, so far, has there been any proof that the septic agent of meningitis can give rise to erysipelas, further than the testimony of observers that the two diseases, in certain epidemics, prevail together, and that in certain cases of meningitis, erythema and urticaria are present. These points, however, may have escaped observation, from the idea of their unity or affinity not having suggested itself to observers. We know that the unity or affinity of erysipelas and epidemic puerperal fever is comparatively of modern doctrine, although much more frequent opportunities of investigating the nature of puerperal fever have been afforded than of examining the nature of meningitis, and further investigation may yet show that the poisonous exhalations of one disease may possess the power of developing the other under favorable circumstances.

It is not here claimed that the unity of erysipelas and meningitis is clearly made out, but it is claimed that a close affinity of the two diseases is made evident, and this affinity is as close, if not closer,

than that existing between erysipelas and epidemic puerperal fever, which are claimed by competent observers to be identical in origin, but varieties of a disease originating from a common septic agent.

Before closing, I would beg leave to mention a symptom witnessed by me in the epidemic upon the coast of South Carolina, in 1864, which I have never seen mentioned as present in meningitis, namely, a drooping of the eyelids.

I was frequently able to detect the disease in its early stages by this sign, among those able to report at Surgeon's call. The patient standing in front, when told to look at me, being unable to lift the eyelid, would throw the head back.

ART. VII.—*Neuro-Physiological and Pathological History of Gun-shot Wounds of the Face.* By MIDDLETON MICHEL, M. D., Professor of Physiology in the Medical College of the State of South Carolina, Charleston, S. C. (*Continued from Page* 38.)

We turn now to the organ of hearing, but not with any very particular results.

So little is the pathology of the ear generally known, that we searched in vain for specific details amid the reports of deafness connected with wounds of the face. Such resemblance exists in the fundamental principle of construction of the eye and ear, that some points may be stated with precision, as having been noticed.

The first circumstance which I think I made out was the absence of any direct proof of the accident sometimes mentioned by aural surgeons, who speak of the *rupture of the tympanal membrane*, from repeated concussions from discharges of heavy artillery, among soldiers at the guns. I have not myself seen a single case of the kind, nor received any authenticated instance from others, of permanent deafness produced in this way. No returns of any such cases were obtained from the casemates of Fort Sumter, though obtuseness of hearing was occasionally, perhaps generally, complained of by those who had for many hours and days officiated at the guns.

When I recall the number and character of wounds, which mutilated the whole side of the face, sometimes tearing away the entire auricle, sometimes carrying off the entire lower jaw, without the slightest injury to this recessed and deeply protected organ of hearing, I am more than ever convinced that these *wind-shots*, as they were formerly termed, commemorate an error of the past.

After the memorable bombardment of Fort Fisher, an artillerist affected to be permanently deaf in *one* ear. He had received no injury, and had lost his hearing, according to his statement, only during his duties in the fort. There had been no exposure to cold.

discharge from the ear, and there was no facial paralysis. On try-
; the *valsalvian* test, no air escaped through the auditory mea-
, and an otoscopic examination showed that the tympanal mem-
ne was uninjured. This soldier had left Wilmington, N. C., to
ain a discharge from the army, and consulted me in Richmond,
ıé weeks after the bombardment. I lost sight of him, and have
further history of the case. Whether the deafness gradually
ıppeaıed or not, must be a matter of conjecture; but it occurred
ne, at the time, that there was not much the matter on this oc-
ion. Certainly no reports of such permanent source of deaf-
s from rupture of the drum-membrane reached me from the
ıfederate army. It is difficult to believe in the rupture of this
ınbrane, except from direct injury, and I must confess that the
s for deafness in *one* ear, while the patient hears well with the
er, are so equivocal as to make me hesitate in registering so
ıbtful an example, of what might be considered, erroneously,
effects of *wind-shot.*

To Aurists who are expected to write with authority, I am far
m being willing to dictate; to those who affirm that they have
t with tympanal ruptures in artillerists, I can only reply that
es which they might cite would show that the accident is simply
sible, which an extensive experience in this war declares never
have taken place. In the diagnosis of such ruptures we must
rely upon cicatricial lines from the periphery to the *umbo* of
s membrane, for the symptoms of its dehiscence are of sufficient
gency to indicate that this has occurred. The drum-head, in its
aminal function, cannot be severed without such a rush of air
›n the middle ear as gives occasion to most painful hyperau-
ion; uneasiness, pressure, and heaviness in the head, together
h hemorrhage; to vertiginous and fainty feelings from in-
ased pressure upon the contents of the labyrinth; irritation of
sympathetic plexus within the tympanum, extending even to
otic ganglion—all of which ends in deafness within the magical
iod of a few seconds from apoplectic extravasations within the
yrinth.

Many cases occurred of destruction direct of the vibratory ap-
atus of hearing. Shock and hemorrhage were the prominent
tures of these most serious wounds, bleeding from the mouth
l ear was always observed. The remarkable fact of recovery
several occasions, is perhaps the most wonderful circumstance
nected with these injuries. Deafness was always the result, and
›longed suppuration was accompanied with discharge of spiculæ
bone.

As in cases of loss of sight from concussion, so in some of these
unds, not immediately through the ear, deafness was produced
m remote lesions, as in the occipital or parietal parts of the
ad, and had it been possible to have examined the interior of
e organ, no doubt, some lesion would have been detected.

The only case which I here record, is one in which I believed the

otic ganglion and *chorda tympani* were compromitted, as *coph* appeared the result of a paralysis, either direct or reflectorially these nerves; first in the disturbance of the proper tension of drum membrane, and again in the perversion of the sense of taste, which was immediately complained of. I relate it as it stands upon my notes, stating that I have just recently heard of my patient, residing now in Brooklyn, N. Y., a relative of whom informs me that he still complains of some perversion of *taste* and of *deafness*.

Case IX.—E. T. B., Sergeant, Company L, First South Carolina Regiment, was wounded December 13, 1862, at Fredricksburg, Va. A minié ball entered the left eye, and escaped just in front of the lobulus of the right ear, between it and the angle of the lower jaw. He was insensible for twelve days; there was but little hemorrhage; the sight was uninjured in right eye; the left eye was of course destroyed; the olfactory nerves suffered no injury; no facial paralysis existed; there was marked impairment in taste, though he seemed to detect quinine. The integument of the face was sensitive over all parts. He complained of strange sensations when he turned from the left to the right side in bed, and when his head was thrown back suddenly, as in looking upwards, a disagreeable fainty feeling ensued, which caused him almost to stagger and fall, which latter symptoms gradually disappeared. Reflecting upon the course of the missile, I was inclined to ascribe the deafness to possible lesion or shock of the otic ganglion and glosso-pharyngeal nerve, though it may have been an injury sustained by the eustachian tube *alone*, since no passage of air was found to enter the tympanum during deglutition, while the mouth and nostrils were closed. It is difficult to suppose that the ball could have only affected the otic ganglion without injuring the motor root of the trigeminus and internal maxillary artery; and there was certainly no hemorrhage of any importance, and no paralysis of the muscles of mastication. Some kind of injury to the branches of the chorda tympani and otic ganglion was suggested to my mind from the impairment of taste and hearing, which, I understand, still continues.

Deafness in another case was the result of fracture through the glenoid cavity, and direct lesion of the middle ear.

Case X.—Private J. Bunch, Company G, First South Carolina Volunteers, was wounded at the battle of Gaines' Mill; the ball entered the right eye, passing out in front of the auditory meatus of the left side. The condyle of the lower jaw was fractured, and probably the floor of the middle ear, since pus and bone escaped. Deafness was the immediate result. At first there was no facial palsy, but this afterwards occurred, and after lasting for some months gradually disappeared, produced by pressure, from depositions around the joint. The patient could scarcely open his mouth to receive food, and was nourished by fluids alone; erysipelas ensued, which was subdued by iron and iodine, and one year afterwards the deafness was still permanent.

Glancing over a long list of like injuries to the petrosal bone,

ıich, as the sense-capsule of audition necessarily resulted in deafss, I find nothing in their histories, to relieve the monotonous petition that follows an attempt to transcribe them: that the ear ıs injured, that suppuration and exfoliation occurred, and that afness resulted, forms the general theme of them all. We took gnizance of those instances only, in which the facial nerve was ıplicated, but pretermit intentionally the consideration of this bject, with its important details, for some future communication, ıly remarking that in many of these injuries of the ear, I observed ıe curious phenomenon of *vertiginous symptoms* which were volunrily complained of, by patients, who were in no wise subject to ıy epileptiform seizures.

To complete this account of injuries of the cranial nerves, we have t to refer to the pneumogastric and hypoglossal; to lesions which would be difficult, otherwise, to determine, whether they should classed as neck or face wounds, since both regions were imcated.

It was wonderful, indeed, to witness the transit of a projectile, ə size of a minié ball, amid structures of such importance as ə larynx and pharynx, carotid and jugular vessels, pneumogastric d sympathetic nerves, all of which frequently escaped injury, thout admitting with those who have written from personal owledge of these accidents, that the mobility of these organs, rmits them to escape danger, and that the very cartilages of an paratus like the larynx deflects a ball. Even when the larynx or arynx was wounded, though air and fluids escaped through the llet orifices for a while, interfering with respiration and deglutin, (except when the finger was placed upon the openings,) yet ese wounds healed without danger to the patient, and with comratively little inconvenience.

So seldom, it appears, did the deep nerves of the neck suffer, *inpendently* or *individually*, that I can record but two instances ncerning the pneumogastric, and but one relating to the hypoɔssal; and by a coincidence, as wonderful as the rarity of the accint itself, both wounds of the pneumogastric were received on e same day, May 6th, 1864.

Case XI.—J. W. Gardner, Private, Company B, Tenth Georgia, ed eighteen years, was wounded May 6, 1864. The ball passed in ɔnt of the right shoulder from without inward, emerging at the anrior margin of the deltoid, and again entering at the posterior marn of the sterno-mastoid muscle, passing thence upwards near the nction of the larynx and trachea, emerging at a point directly oppote, and close to the trachea, which must have been slightly injured, nce, Surgeon John R. Page, of Lynchburg, Va., in his account of this se, states that at one time air seemed to pass through the wound at ıe aperture of exit. Upon his admission into the hospital, it was pposed but little more than a flesh wound had occurred, for ough he coughed at times so as to attract notice, yet there was

no great uneasiness experienced from this symptom, which disappeared as the orifices of entry and exit healed, and this was accomplished by May 31st, when, to all appearance, he felt well, with the exception of a complete extinction of voice. *Aphonia* was instantaneous upon being wounded, and was thought attributable to the wound in the trachea. But slight as this injury was, it soon healed, yet aphonia continued to be a permanent trouble.

The following is another illustration of the history of a similar wound:

Case XII.—Private H. M. Chapman, Company E, Fourth Alabama, was, on May 6, 1864, wounded by a minié ball, which passed entirely through the neck. The wound of entry was just behind the right sterno-mastoid muscle, directly opposite the larynx, the ball emerging on the opposite side near margin of the trachea, apparently in a straight line. There was immediate loss of the power of vocalisation, with but little hemorrhage; but for the *aphonia*, which fixed attention, the more particularly since the windpipe had not been injured, this wound was thought nothing of, being reported by Surgeon W. O. Hudson as a "slight wound." This patient made a rapid recovery, though the aphonic symptoms continued to the last, and were regarded as permanent.

In my comments in my note-book upon these two most rare, but obvious injuries of the inferior laryngeal branches of the pneumogastric, I find the following remarks: "Strange that two gun-shot wounds which seemed to be of no moment in comparison with those surrounding us at the time, should, upon careful examination, prove so rare and so important. To him who is ever ready to base his practical acquaintance with disease, upon the best attested experiments and ascertained principles in the science of biology, the brief history of these cases becomes the record of a vivi section as beautiful and complete, as any which a Bischoff, Longet or Bernard could have instituted."

Indeed, recovery followed in both of these cases, because the superior recurrent branches of the pneumogastric were not wounded. At no time was respiration embarrassed by impairment of the reflex impulse at the glottis, which sustains the ryhthmic movements of laryngeal respiration: while the *instantaneous* paralysis of all the intrinsic muscles of the larynx concerned in vocalisation declares at once that the inferior recurrents have suffered. Permanent aphonia corroborates the diagnosis of a double lesion of these branches, and even should the voice have returned, in either or both of these patients, the unexpected event finds a ready explanation in what we know of the restoration of *neurility* after section and even ablation of portions of nerves.

Towards the end of the general assault at Kenesaw Mountain, under a fire of every kind of projectile, a wound occurred which furnished the only instance in which an isolated section of the hypoglossal nerve was affected. On many occasions has the tongue

been wounded in complicated face wounds. In some instances its almost complete ablation was called for. Dr. Gravatt was once obliged to remove two inches of the organ with the ecraseur. The only case of simple injury of the hypoglossal nerve, with no other difficulty but partial paralysis of the motions of the tongue, is that which through Surgeon C. R. Norman I am permitted to relate:

Case XIII.—Private, S. Carrol, Company I, Thirty-ninth Mississippi, aged about twenty-two years, was wounded by a minié ball through the neck, while on the top of Kenesaw Mountain, the enemy's lines being at the foot of the mountain. The ball entered the right arm, near the shoulder, fracturing the coracoid process of the same side, passing out, and then re-entering the neck just below the right tonsil gland, wounding the root and side of the tongue, and passing thence in an oblique line upwards, beneath the spinous process of the sphenoid, making an exit at the sigmoid notch, and destroying the zygomatic arch. The hemorrhage was profuse, and he was unable to swallow without closing the opening in the pharynx with his finger. When the mouth was closed, air could be made to pass through the bullet orifice. In examining the throat it was evident that the movements of the tongue were impeded, as he could not raise it up nor thrust it out in a perfectly straight direction, it being carried always to one side. The patient made a safe recovery; and as no impairment of general or special sensation is mentioned, (taste was not affected,) I infer that this was an unilateral lesion of the hypoglossal nerve. We certainly are largely indebted to Dr. Norman for the report of this case.

No resumé is necessary of the contents of this paper, but concerning the result of some of these injuries on the retina, I would remark, that it has always appeared to me, that a provision so perfect exists for regulating the distribution, and equalizing the pressure of blood within the eye, as seems to explain why injuries, not directly implicating the orbit or its contents, are so rarely followed by *permanent* blindness. The provision to which I allude establishes a resemblance between the eye and the brain: the ophthalmic artery first passes through a bony canal or opening, while its vein returns the blood without a like obstruction through an entirely different pathway; the artery, before penetrating so delicate an organ as the eye, then divides into its minute ciliaries, facilitating the yet more delicate division into a choroidal plexus of reticulated capillaries. The influence which such an arrangement exerts over the circulation, is in every way similar to that which obtains through the carotids, vertebral, and pia-mater vessels of the brain. Such an anatomical disposition of structure appears to me to account for the infrequency of *permanent* cecity, from concussions alone, when no direct injury has been sustained by the eye or nerves within the orbit.

It may be remembered that some oculists have doubted the super-

vention of amaurosis from lesions about the frontal nerve accompanied by ptosis. To my own mind, the erroneous assertion of Mr. Lawrence and others, that amaurosis cannot take place in this way, that however much vision may be affected at the time, sight will return, is satisfactorily accounted for by the few cases in which complete blindness is likely to occur within one's personal experience in civil practice. There is no reason why permanent, as well as transient retinal injury should not follow lesions of the frontal nerve or contusions over superciliary ridge, where no lesion of any kind is sustained and no ptosis exists, for like concussions and wounds in remote parts of the cranium—as in the occipital and parietal portions, neck, and even shoulder, have been followed by impairment of sight which often disappeared, but which occasionally, to my personal knowledge, resulted in irremediable blindness accompanied even by *ptosis* in both eyes, which justified the soldier's discharge from service.

Violent tractions upon the nerves about the orbit; upon those in distant regions; reflective propagation of neural disturbance towards the centres, or through the sympathetic; will account for the most remarkable of such infrequent accidents. The literature of our science contains such records as the memorable case of L. Bret, in which, at the reduction of a recent dislocation, paralysis of the brachial and cervical nerves at once occurred, accompanied with *ptosis*, and partial destruction of vision on the same side, of course through some injury to the sympathetic. Another case bearing upon this point we have published in case VI.

We have examined the subject of nerve lesions more particularly from a physiological point of view, though, it is hoped, not entirely without its practical importance to the pathologist. Allusion has been made to accidents of an epileptic and tetanic nature, which certainly impressed me as interesting. So convinced am I that these epiphenomena are absent in face wounds, that should a case of either complication supervene upon a purely simple case of gunshot wound of the face, with no lesion at base of brain or spinal cord, I would be very much inclined to inquire particularly into the antecedents of the patient, suspecting that he may have been a subject previously of epileptic disease, or one who had recovered from tetanus on some former occasion, as we know such to be especially prone to manifest like tetanoid symptoms upon the most trivial injury afterwards.

Suppuration has been also referred to as abundant in these wounds about the face, not solely from ingress of air, for it has come within my experience that prolonged suppuration has been kept up by the retention of a ball. The harmless nature of these wounds is remarkable, considering the amount of suppuration which attends them, but is doubly so when we discover that sometimes life itself has been endangered by a ball which, through ignorance, timidity or neglect, had been allowed to remain for an in-

definite period, perhaps in a perfectly accessible part of the face. Some of these instances furnished very curious examples of the course which a ball may occasionally be discovered to take.

Case XIV.—At the Jackson Hospital I was invited to examine Sergeant J. W. Cordrey, Company G, Thirteenth Georgia Regiment, who had been wounded on the 6th of February, at the battle of Burges' Mill. The ball entered the raphé of the upper lip, knocked out several teeth, injured the tongue seriously, and lodged for several days in the back part of the pharynx. Its sojourn here was not recognized until the patient began to discharge mouthfuls of pus, when suddenly the ball was expectorated. Such cases explain the apparently wonderful course taken by the ball through the entire track of the alimentary canal.

Case XV.—Surgeon S. Choppin, of General Beauregard's staff, reported to me an instance of this kind. Private J. D,, of Colonel Clark's Batallion, New Orleans Confederate Guards, at Farrington, about four miles from Corinth, was shot in the glabella by a minié ball; the ball lodged for twenty-four hours, and was then passed by stool.

Another case of this kind, after the battle of the Wilderness, came under the observation of Surgeon J. L. Cabell, of the Charlottesville Hospital, Va.

Case XVI.—Private J. W. N., Company B, Forty-fifth Georgia Regiment, was wounded May 5th, 1864, at the battle of the Wilderness, by a minié ball, which entered the outer extremity of the left supra-orbital ridge, and passing down through antrum of superior maxillary bone, entered the mouth, and was swallowed. The eye was destroyed, but the wound healed without a bad symptom, and the ball was passed *per anum* three or four days after the receipt of the injury.

The ball has sometimes been retained for years before it was expelled.

Case XVII.—At the battle of "Seven Pines," June 1st, 1862, Lieutenant Charles T. C., of the Eighth Virginia Regiment, was wounded by a minié ball just below the left eye, near the side of the nose. It passed horizontally backwards and downwards, and lodged where it could not be reached, apparently in the pharynx. At times deglutition became difficult and almost impossible, until its presence was tolerated and ceased to give much inconvenience, when, in June, 1866, more than four years after the accident, a minié, weighing one ounce, was coughed up, and appeared to come from below the right ear, beneath the jawbone.

From the size of the conical ball, and the character of the lesion it produces, it is most frequently expelled when suppuration is fairly established, for I have no examples to relate of a minié ball being permanently retained encapsulated within the tissues or organs of this region, as has been observed, when the small round ball was the vulnific agent. The contrast in this respect is striking. At

the battle of Waterloo, for example, a man was shot in the left eye and fell. The gush of blood, and his insensible condition, left no doubt as to his death. The regiment in square defending itself from the Curassiers, supposing him dead, threw the body out of line. Some months after, the *dead* man presented himself at Paris, with the ball still in his head, and as it could not be extracted safely, he went to England, where he was soon again reported dead; but thirty-five years after these occurrences, the same individual was examined once more, and found in perfect health, living in Carlisle, where he had become the father of a family, with the ball harmlessly occupying the same position.

We have limited our remarks to nerve injuries in this region, or we could relate extraordinary instances in which recovery took place, where nearly the whole face was torn away, by shell-wounds; and in which all the deeper structures concerned in deglutition were exposed to view, without the support of the jaw: the tongue hanging out over the neck; the salivary glands, stripped of all investment, and pouring down their secretions over the clothes, the larynx in view, and the very pharynx itself accessible to touch and sight, in all its upper portion. Such hideous deformities, that rendered life unbearable, were examined, by Drs. Gibson, Read and myself and operated upon, and recorded briefly by my friend, the late Professor Gibson, in the Confederate Medical and Surgical Journal, published during the war in Richmond.

Reviews and Bibliographical Notices.

Art. VIII.—1. *The Science and Art of Surgery.* By John Eric Erichsen, Senior Surgeon to University College Hospital, &c., &c. A New American Edition from the Sixth British Edition. Henry C. Lea. Philadelphia. 1873.

2. *The Practice of Surgery.* By Thos. Bryant, F. R. C. S., Surgeon to Guy's Hospital. American Edition. Henry C. Lea. Philadelphia. 1873.

English works upon surgery abound. The character of the English national mind perhaps explains the fact that the most practical department of medicine is the one which is preferably selected to illustrate the medical literature of the country. In many of the surgical writings we find good practical lessons and doctrines. There may be deficiencies as to material and detail, form or arrangement, and imperfections of style, yet the most prac-

may safely rely upon the more prominent guiding rules. While we cannot say of most of these modern writers that their style is ornate, or their descriptions graphic, we can agree with a late reviewer of one of the above named books, that there is a freedom from "scietific *high falutin.*" And this we consider refreshing.

A prominent defect in modern surgical treaties—noticed less, perhaps, in the German than in others—is the failure to bring surgical treatment up to the stand-piont of modern physiology, and pathology. The past is revered and tenaciously clung to, the doctrines and rules of the old masters followed as a faith, and, despite progress and modern discovery, we have routine directions for treatment so stamped upon the pages that "he who runs may read."

The several successive editions of Mr. Erichsen's book have been ever welcome. The work from the first was assigned a high position, and has continued to be recognized as a fair exponent of English surgery. Progressiveness has perhaps characterized it to a larger degree than most cotemporary treatises. Personally, we know the author to possess that energy of character which is necessary to his high office, and what is apparent in the wards of his hospital we find reflected upon the pages of his book. Usually he is abreast of the time, but ever suspicious of hasty theories and conclusions, which on the one hand may lead to innovations, and on the other induce the abandonment of established rules of practice. There is much of truth in this language of the great Bacon: "*They be the best chirurgeons which being learned incline to the traditions of experience, or being empirics, incline to the methods of learning.*" Mr. Erichsen adopts this as the motto of his book, and he is inclined religiously to adhere to it.

We may instance blood-letting as one of the "traditions of experience" rather than the offspring of modern learning. As a remedy for disease it has certainly lost ground both with the empiric and the man of science, and at best it has come to be regarded only as an exceptional means in "extreme cases." And yet, when discussing the constitutional treatment of inflammation, we find our modern author affirming that "the most powerful and efficient means we possess is certainly blood-letting." This is qualified by the presentation of the old rules as to the extent of the inflammation, its specificity, the powers of the patient, his age, residence, habits, &c. The theory of its usefulness, founded upon the fact (?) that it lessens the force of circulation and abstracts blood that is deteriorated by the products of the waste of the tissues, is regarded by Mr. E. as tenable. In another place the author remarks: "Blood-letting is certainly not often required in the treatment of surgical inflammations." So the struggle is evidently going on in Mr. Erichsen's mind between adherence to routine rules, and submission to modern enlightenment. This is at least his apparent attitude, and it is enough to subject him to the charge of "blood-

thirstiness," made by the "Practitioner." We should have been gratified with the statement from Mr. E. as to the number of times he had bled patients for surgical inflammations during the last ten years. We feel assured, in spite of the language of his book, that the instances are not too numerous to be summed up. The Surgeon of University College Hospital is no doubt practically right, but not yet ready to disavow his faith in the old masters.

We like much better the ring of the following language as applied to the use of mercury as an alterative in sthenic inflammation: "And I confess that I can in no way give my adherence to the doctrines of those who, disregarding the daily evidence of professional experience, deny the utility of the preparations of this mineral in the treatment of certain forms of inflammatory disease." Right or wrong, this tells us where the man is. Here the Baconian doctrine is satisfied—the man of learning boldly, and we say wisely, inclines to the traditions of experience! Pity he could not have been as equally bold in giving his daily experience with the "most powerful and efficient means," as with the subsidary remedy.

But our object is not so much to present a critical review of a work, so little amenable to criticism, as it is to advert to portions of the subject matter of modern interest, and thus enable the reader to judge of the present position and merits of the book.

Pyogenesis, or pus formation, is illustrated by reference to the researches of Conheim, Hoffman, Von Recklinghausen, Billroth and others. The advent of the pus corpuscles, so far as ascertained, may be considered not altogether due to migration through the walls of the blood vessels. To a large extent they must be formed in tissues outside of the vessels. The generally received view upon this point, as accepted by the author, may be expressed in the language of Burdon Sanderson: "A region is found outside of the focus of suppuration, in which the connected tissue corpuscles present alterations, which are so distinct, that it is impossible for any one who is conversant with them to doubt that they signify that the tissue is germinating."

In the chapter on the *Process of Repair* we find it still affirmed that tissues unite by the direct growing together of opposite surfaces. (Hunter's union by the first intention as contradistinguished from union by adhesive inflammation.) This is the "*Immediate Union*" of Macatney. Such doctrine can now hardly be sustained if we believe in migrating cells and germinating tissue corpuscles. These constituting an *infiltrating material* consequent upon the irritation of the part involved, most assuredly serve as the *coalescing medium* for the opposing surfaces. It little matters if cicatricial tissue can be microscopically observed or not; the process is a grade of union by adhesive inflammation.

The *Anti-Septic Method* of Mr. Lister for securing primary union of wounds is considered "novel, scientific and ingenious." But

there are disturbing influences which prevent complete success of the method. "Theoretically," our author thinks it "perfect;" "in practice its success is not constant." There are an infinite number of circumstances that may influence the repair of a wound, and no method can, therefore, guard against all of these. This fact should not affect the value of the anti-septic plan. The details of the method as they have been ingeniously and industriously varied and added to from time to time are fully given. Want of space will not permit of our here enumerating these, but we would remark that the very minuteness of the details is the great barrier presented to the carrying out of the anti-septic principle of treatment. We believe in consequence of this that the method will never become popular, or meet its true desserts wilh the general practitioner.

Torsion, for arrest of hemorrhage, which has so recently been revived and extensively practiced in connection with the anti-septic treatment of wounds, is not regarded in the most favorable light. The question of its safety, even in connection with the largest vessels, is yielded, but "practical experience and experiment tend to show that the twisted end of a large artery is in reality a foreign body, and that in this respect torsion, when applied to the principle arteries of a limb, presents no advantage over the ligature." With small vessels the case is different. "Mere pinching and moderate twisting of the bleeding point will be sufficient to arrest the hemorrhage from it," and such injury does not make the end of the vessel a foreign body.

In the chapter on *Fractures* we have, as contrasted with former editions of the book, a more complete account of the Plaster of Paris Bandage, including descriptions of the apparatuses known as the Bavarian and Neudorfer's. Heretofore Mr. Enrichsen has been an advocate of the "Starch Bandage" as the preferable form of immovable apparatus. He now admits that the plaster apparatus has the two-fold advantage of being lighter and of drying and hardening more quickly. As the sudden *setting* of the plaster is one objection felt by many, who are not adroit in the application of the material, we may here note that this is retarded by solu tions of borax. "A solution of one part to twelve of water will delay the setting fifteen minutes; one part to eight of water will retard it fifty minutes."

One of the explicit injunctions of our author, in this and in previous editions of his book, is that "*no bandage should be applied under splints*," in the treatment of fractures, "more particularly at the flexures of joints. A bandage *under* the splints is not only useless, but highly dangerous, by inducing risk of strangulation. No bandage should be applied *to the part of a limb that is the seat of fracture.* The part below the fracture may advantageously be bandaged, in order to prevent œdema." We cannot pass this by without critical comment. While ready to admit that as a rule the

tumefaction bandage may be dispensed with, we apprehend there is no necessity for such absolute doctrine, as, ordinarily, there is no great danger of strangulation in treating simple fractures. The experience of that distinguished pioneer surgeon of our Western country, Dr. Dudley, and those who still adhere rigidly to his teaching, would sweep away Mr. E.'s theoretical views. The danger is ever in the improper application of the bandage, and in the unequalness of its pressure or constriction, rather than in its simple tightness. But how does Mr. E. reconcile these rules with his advocacy of the *immediate* application of the Starch Bandage? He curiously enough here insists that "no roller or bandage should be applied directly to the fractured part under the splints"—splints of pasteboard, which he uses in this connection. In his experience he has found the apparatus in the course of three or four days "*loosened somewhat.*" The layer of cotton wadding which most surgeons interpose between the integument and the first roller to *guard against constriction*, Mr. E. thinks useful, because, "being elastic, it accommodates itself to the *subsequent diminution in the size of the limb.*" What has become of his phantom strangulation?

In treating of *Dislocations*, the views of our countryman, Professor Bigelow, in regard to the Y ligament, and hip luxations in general, are introduced and receive, as they have done everywhere, most respectful consideration.

In the chapter on the *Diseases of the Lymphatics and their Glands*, there has been added a section on Lymphadenoma, or simple Lymphoma, a tumor composed of a tissue exactly resembling the cortical part of a lymphatic gland—the so-called "adenoid tissue of His." It occurs most commonly in connection with the lymphatic glands of the neck, axilla, or groin: at times accompanied by an excess of white corpuscles in the blood: or this feature may be absent, constituting the disease described by Trousseau as *Adénie*. Billroth gives a fuller account of this interesting form of disease.

We have here also a section devoted to *Elephantiasis* of the Legs and Scrotum, as these diseased conditions are believed by many to originate in the lymphatics. The glands, according to Virchow and Rindfleisch, are supposed to become impervious to the transmission of lymph, and hence the hypoplastic deposits that ensue. We have tables of the ligature of the femoral and external iliac arteries for the relief of the affection of the lower extremity. In fifteen cases the femoral was tied: in four the external iliac. Among the operators are Dr. Carnochan, of New York, who originated the practice, and Dr. Ogier, of our city. The statistics, as far as they go, exhibit, says Mr. E., "excellent effects from this method of treatment, little as it can be explained by the received pathological views of the disease." The operation on the Iliac "has the recommendation not only of being completely above the limits

of the disease, and consequently in parts that are quite healthy, but also of more completely controlling the nutrition of the limb than can be done by ligature of the Superficial Femoral."

The second volume begins with *Diseases of the Arteries* Three chapters are devoted to the important subject of Aneurism, which has always been a matter of close investigation with Mr. E. We find valuable additions to the literature of the disease, and to the recorded experience concerning the operations upon the great vessels. The experimental operations in Innominate Aneurism, as seen by Mr. Erichsen's tables, have been numerous. These consist in the single ligature of the Carotid or the Subclavian, and the double operations on the two vessels. The results as to the single ligation of the Carotid or Subclavian would seem altogether adverse to these precedures. In two-thirds of the cases, the patients, according to Mr. E., have been "directly killed by the operations." In the very small percentage of cases where improvement followed, and in the single instance of cure, the results "were due to accidental circumstances unconnected with the operations." Respecting the "simultaneous ligature of both vessels," the cases reported as benefitted "would probably have had an equally good, if not a better prospect of life, if treated by palliative and constitutional means."

This reasoning is a little assumptive, and we think the picture overdawn. In spite of Mr. Erichsen's estimate of this, as he is pleased to term it, "enterprising surgery," materials have accumulated, even since his writing, which must induce us to receive his generally correct opinions *cum grano salis*. Certainly surgical sentiment in England seems now more disposed to countenance the distal ligature in Aortic and Innominate Aneurisms. The left carotid is the vessel preferably selected for operation, with the view of effecting that regurgitation of blood which is possibly to be followed by deposit of fibrine and retrocession, if not cure of the aortic disease. With the use of the carbolized catgut ligature there is no doubt that the "enterprising surgeons" will push experiment still further.

One difficulty is in the differential diagnosis between Aortic and Innominate Aneurism. In Mr. Heath's remarkable case of ligature of the Carotid and Subclavian for supposed innominate disease, the patient survived four years, but it was found after death that the aneurism pertained to the aortic arch. Nevertheless the advocates of the distal ligature think this case quite encouraging, so far as the principle of such an operation is concerned. Mr. Heath has more recently tied the carotid with favorable results in a case of Aortic disease. A successful case of ligature of the Subclavian for Innominate Aneurism, by Mr. Bryant, in 1871, is not reported by Mr. Erichsen. In this case there was "rapid convalescence with great diminution and consolidation of the Aneurism. The man is still alive." Mr. Bryant thinks the result of these operations "not so

discouraging as to preclude the question of operation in favorable cases." (Bryant's Surgery.)

The operation by *Galvano-puncture* in similar cases is likewise discouraged by Mr. Erichsen. Yet we have some remarkable successes reported, besides those of Nicolli and Ciniselli. One very recently, by Dr. McCall Anderson, who also refers to others reported since his own case. (Lancet, May, 1873.)

Mr. Ericksen thinks there is one point in the treatment of Aortic Aneurism, that falls more within the province of the surgeon, viz.: the question of opening the windpipe to relieve from threatened death by laryngeal spasm. The diagnosis must, however, be clear. The spasmodic dyspnœa must be purely laryngeal—which is rare—and not dependent on compression of the air-passages within the chest. The surgeon must recollect that if he operates and the relief be not "immediate and great," he will "usually get the credit of having killed the patient."

In chapter LII., which treats of *Disease of the Hip Joint*, we have accounts of Barton's, Sayres' and Adams' operations for Osseous Angular Ankylosis. Full credit is given to the American surgeons for the establishment of distinct principles in their respective operative procedures. The operation of Mr. Adams is considered, from its greater simplicity and safety, preferable to that of Prof. Sayre. The neck of the fermur is in this method divided subcutaneously with a narrow saw. Mobility of the part after operation is considered of doubtful utility.

In chapter LX., treating of *Operations on the Air-tube and the Chest*, we have an account, with excellent illustrations of instruments, of Trendelenburg's operation of modified tracheotomy, to be used in cases of operations about the jaws, palate, or pharynx, where there is danger from blood entering the air passages. We must refer the reader to the full description of the operation, if he is not already familiar with it.

In the chapter LXVIII., on *Diseases of the Bladder*, we have a full description of the operation of Dr. Ayres, of New York, for extroversion of the bladder, as modified by Mr. Wood, of England. It is affirmed that "after the case is complete the patient is troubled by the growth of hairs from the under surface of the umbilical flap, and the accummulation of phosphates upon the hairs, and in the angles of the new bladder. This is best relieved by extracting the hairs with a pair of forceps, and by uisng weak acid injections to remove the accummulation of phosphates." We apprehend that this operation of removing hairs from within the bladder is more theoretical than practical.

As regards the use of the ligature as a means of securing the pedicle in *Ovariotomy*, while it is considered the "simplest and saftest method of guarding against hemorrhage from the cut stump," one of the greatest disadvantages of its use is "that owing to the shrivelling of the pedicle, it is apt to slip, and thus lead to

a fatal hemorhage." Where the ligature is used, it is considered best to cut off both ends, and carbolized ligatures are to be preferred. What will our distinguished friends, Drs. Sims and Emmet, of New York, say of the following: "I forbear to speak of the employment of silver, lead or other metallic ligatures, as they have fallen into disuse, and been abandoned by the most experienced ovariotomists."

A brief account of *Hernia of the Overy*—matter new to this edition—ends the book. In three-fourths of 28 recorded cases the displacement has been inguinal. In nearly one-half of the cases it was congenital. All the instances of double ovarian hernia were inguinal and congenital.

Want of space compels us to defer the notice of Mr. Bryant's book until our next issue.

ART. IX.—*Clinical Lectures on Diseases Peculiar to Women.* By LONDER ATTHILL, M. D., University of Dublin; Fellow and Examiner in Midwifery, &c., &c. Second Edition, revised and enlarged. With Six Lithographic and Wood Cut Illustrations. Philadelphia, Lindsay & Blakiston, 1873.

This is a neat and instructive little volume, of 241 pages; calculated to fill up a gap left in most of the large systematic works on gynæcology. The lectures are truly clinical, delivered from patients actually examined and treated before the class, thus affording the most valuable mode of instruction in the manner of interrogating the female organs of generation, and the details of appropriate operative procedures—far better learned by actual observation than from pages of written descriptions. "The following pages," remarks the author in his preface, "contain the substance of the lectures addressed to the class attending the Adelaide Hospital during the past year. They were not delivered in any regular order, but as cases suitable for illustrating the various forms of uterine disease presented themselves. Nor had I, at the time, any intention of publishing them. Subsequently I was induced to do so, influenced mainly by the desire, expressed by some members of the class, to have for reference a concise summary of the practice they had seen carried out in the hospital."

The course comprises fifteen lectures, with illustrations calculated to convey a good idea of the conditions described. These lectures plainly show that the author is fully up with the rapid advance which this subject has made within the last twenty years; and, although we may differ with him in regard to some of his views and operative procedures, there is so much of practical good and so little to condemn, that we can confidently recommend the book as a valuable clinical manual to those who may not have the time, at

once, to devote to the critical study of the larger and more systematic and elaborate works. At the same time, we feel constrained to raise a warning voice to young practitioners against the too common error of abandoning a course of thorough systematic study, for the use of mere abstracts and manuals. These have their appropriate place and definite value; but those who rely upon them exclusively will find themselves drifting down the stream, while others are shooting ahead.

The first lecture is taken up in very judicious and clear remarks in relation to the mode of examining patients, the use of the speculum and uterine sound, and mode of manipulating these two instruments. Particular mention is made of the speculum of Furgusson, the bivalve speculum, and the Duckbill (or Sim's) speculum. It appears somewhat strange to us, that gynæcologists abroad should still be inclined to cling to the primitive cylindrical instrument. One who has been in the daily habit of using Sims' instrument, and the last improvement of the speculum of the late Dr. Nott, could scarcely be content with the instrument of Furgusson. The improvement in Nott's speculum, to which we allude, consists in the arrangement of the screw, by means of which the pubic branches are elevated and expanded, in a horizontal instead of a vertical direction. With the improved instrument it is unnecessary to bring the nates of the patient over the edge of the bed or table. The screw being horizontal, when the blades are expanded, the screw will not impinge upon the bed or table. We consider this modification as rendering this instrument faultless in the class of cases coming within its range. It is self-retaining, and leaves the operator free use of both hands. As a general rule, however, we prefer the speculum of Sims. With it the field of view is more extended and perfect, affording more room for all operative procedures, except when the rectovaginal septum is more particularly implicated. We differ from our author in considering the pain occasioned by this speculum, in drawing back the perineum, as an objection to its use. The pain, according to our experience, is no greater than in the application of other instruments. Another objection urged against it, by many, is that its use requires the presence of an assistant. The sooner this objection is done away with the better. In no instance have we failed in overcoming the objections of the patient to the admission of an assistant, when the case was fairly and properly placed before her. In all manipulations of this character it is better, for obvious reasons, to have a third party present. In many cases an intelligent female friend or nurse can be instructed in holding the instrument after its introduction. Prejudices of this sort are giving way every day, and we feel assured that truth and reason will soon eradicate them entirely.

In the second lecture the author takes up the subject of leucorrhœa, which he treats in a concise, but clear and thorough manner,

recognizing its sources in the vagina, canal of the cervix, and the cavity of the uterus. He also notices, in connection with leucorrhœa, *Vaginitis* and *Vaginismus*. In speaking of the former, he remarks:

"There is one form of sub-acute vaginitis which gives rise to very distressing symptoms; in it we see apthous looking patches on various parts of the vagina. I have invariably remarked that this condition of the vagina is accompanied by most distressing pruritus, not that pruritus does not occur in cases of vaginitis in which these apthæ do not exist, for, on the contrary, pruritus is a very common accompaniment of sub-acute vaginitis, but it is most marked, and nearly, if not always, present in conjunction with them; and here let me impress upon you the uselessness of attempting to treat itching about the vulva, without first ascertaining what the condition of the vagina and uterus may be, for you will seldom fail to discover either that inflammation of the mucous membrane exists, or that the uterus is congested or ulcerated, and till these be cured, all your efforts to relieve permanently the pruritus will fail. If vaginitis alone exists, you will, with the view of attaining this object, and at the same time of checking the pruritus which it causes, use in the first instance soothing applications, and then astringent ones. Of the former, none can compare with infusion of tobacco. It should be made by infusing a drachm of the unmanufactured leaf in a pint of boiling water. The infusion thus prepared should be injected into the vagina twice a day. It is necessary, however, to exercise some caution in using it, for if the orifice of the vagina is very narrow, some of the infusion may be retained in that canal, and nausea and vomiting result from its absorption into the system. When the acute symptoms have somewhat abated, the addition of two drachms of borax to the infusion adds greatly to its efficacy."

The author's remarks on the subject of vaginisms arising from masturbation, are judicious and worthy of consideration. We fully endorse the following opinion, especially in relation to the removal of the clitoris: "These distressing cases can be cured by moral means alone; local treatment is useless, and generally injurious, for it attracts the patient's attention to the genital organs, the very thing we should be most anxious to avoid. I cannot find words sufficiently strong to condemn, as I would, the barbarous practice of mutilating the patient by the removal of the clitoris. This operation is as useless as it is disgusting, for there is no truth in the idea that in the clitoris alone is seated the nervous expansion, which serves the sexual orgasm."

The third lecture treats of menstruation, amenorrhœa, and the treatment of various forms of this disorder. The subject is well arranged and fully discussed. The entire lecture is one highly suggestive and full of interest. He speaks of what has been termed the "galvanic stem pessary" in terms of approbation, and presents, in a foot note, the following views in relation to the modus

operandi of this instrument: "While I retain the term 'galvanic' as applied to this pessary, and say I found it of use, I do not wish it to be understood that I consider it to possess any galvanic properties, which as such act on the uterus. There can be no doubt, however, but that when the two metals (copper and zinc,) of which the instrument is composed, are in metalic contact, and surrounded by a fluid, containing saline matter in solution, a certain amount of electrical action goes on, and that when the stem is introduced into the cervical canal, the salts contained in the uterine secretion are decomposed, and corresponding salts and oxides of zinc and copper are formed, which act on the mucous membrane lining the uterus." After all, is it anything more than a metalic stem, and is not its action merely mechanical?

The fourth lecture is taken up by Dysmenorrhœa. While this is not as full a discussion of this vexed question as might have been desired, yet there are some interesting clinical facts brought forward, and the subject of mechanical and surgical treatment is briefly, but clearly, stated.

Menorrhagia is more thoroughly discussed than any disorder of which the author treats; lectures fifth and sixth are wholly devoted to its consideration. These are worthy of careful study. The author is a strong advocate of the introduction of fuming nitric acid and solid nitrate of silver into the cavity of the uterus. We will transcribe the details of one case of subinvolution of the uterus as a good illustration of the author's style and mode of clinical instruction:

"F. L., at twenty-four, married about a year, is a delicate young woman, of lymphatic temperament: mensturation has always been profuse, especially if she takes walking exercise or exerts herself during the flow. She became pregnant after the occurrance of the second menstrual period subsequent to her marriage, but having imprudently taken a long and fatiguing walk, she aborted at the eighth week. The two subsequent menstrual periods were so profuse as to reduce her to a state of extreme debility. Ergot, gallic acid and numerous other astringents were administered, but they failed to check the hemorrhage. This was her condition when I saw her. On examining her, I found the uterus to be considerably elongated, the sound passing to the depth of more than three inches; there was not any ulceration. The history of the case being altogether against the supposition of the existence of a polypus, I came to the conclusion that the menorrhagia depended on subinvolution; in fact, that the uterus had never regained its normal size and tone since the miscarriage, which had taken place two months previously. I therefore decided on carrying out a plan of treatment, the value of which you have had, in the wards of this hospital, repeated opportunities of judging—I mean, the introduction up to the funclus of the uterus of ten grains of the solid nitrate of silver, which is left to dissolve there. This I accordingly did. It

produced considerable pain, that lasted for five or six hours, but no further unpleasant results followed. I confined the patient to bed for three days, and then allowed her to go about. Menstruation appeared at the regular time, and was moderate in quantity. She became pregnant immediately after, and is now approaching the full term of utero-gestation." We must refer the reader to the work itself for directions and cautions in relation to the mode of introducing the solid nitrate of silver into the uterine cavity. The author does not offer any explanation as to why the solid nitrate of silver, when suffered to remain in the cavity of the uterus, does not act with the degree of violence that we should naturally infer, and which often follows the use of liquid intra-uterine injections, even to fatal results. In this connection, some interesting facts and experiments, on the subject of intra-uterine medication, by the late Dr. J. C. Nott, may be found in the American Journal of Obstetrics, volume 3, page 36. Courty also refers to this mode of cauterizing the cavity of the uterus, and offers an explanation of its modus operandi. He thinks that the principal cause of the innocuousness of uterine cauterization by the retention of a crayon of nitrate of silver within the uterine cavity, is that the mucous membrane of this organ is not subjected to the immediate and direct influence of the caustic, that there exists, on this membrane, granulations or mucosities; hypertrophy of the tissue or merely hypersecretion of the glandules of this membrane; so that the nitrate of silver does not come in immediate contact with it, nor produce truly profound cauterizations upon any point. That the presence of the crayon of nitrate of silver excites a hypersecretion of mucus, which, to some extent, protects the membrane. The crayon is enveloped by this mucus, which coagulates around it, so that it is only through this envelope that an interchange is produced between the caustic and the secretions of the uterine cavity. He states that the crayon of nitrate of silver—or rather its form—is thrown off from the uterine cavity in seven or eight days, when it will be found to be greatly modified, altered, decomposed, softened and laminated. It is evident that it has been profoundly modified by its stay in the uterine cavity. It is not dissolved, as it would be in a glass of water. This modification is produced by the successive changes between the elements of which the caustic is composed, and those of the abundant mucus secreted by the uterine mucous membrane. The latter is only gradually subjected to the action of the caustic. He thinks we can, in a manner, comprehend that this action differs from cauterization, properly speaking. (*Traité pratique des Maladies de L' Uterus, &c., par A. Courty, Professeur de Clinique a la Faculté de Médecine de Monpellier. Deuxième édition—Paris*, 1872, *page* 293.)

But these remarks have already covered more space than was anticipated, and we shall be compelled to bring them to a close, notwithstanding the interesting subjects yet untouched. The remain-

ing lectures are taken up with the subjects of Polypus, Fibroid Tumors, Ovarian Disease, Acute and Chronic Inflammation of the Cervix Uteri, Displacements of the Uterus, Enlargements of the Uterus, and Cancers, all of which are illustrated clinically, and discussed in a concise and clear manner. The work is from the well-known publishing house of Lindsay & Blakiston, of Philadelphia. We cordially welcome it to a place in our library, and recommend it to the profession generally. F. M. R.

ART. X.—*Hand-book for the Physiological Laboratory.* By E. KLEIN, M. D., Assist. Prof. in Pathol. Laboratory of the Brown Institution, London, formerly Privat-Docent in Histology in the Univ. of Vienna; J. BURDON-SANDERSON, M. D., F. R. S., Prof. Pract. Physiol. Univ. College, London; MICHEAL FOSTER, Prælector of Physiol. Trinity Coll. Cambridge, and T. LAUDER BRUNTON, M. D. D. Sc. Lecturer on Mat. Medica, St. Barthol. Hospital, London. Edited by J. BURDON-SANDERSON. In two vols., with 133 plates, containingg 353 illustrations. Vol. I. *Text.* Vol II. *Plates.* Philadelphia, Lindsay & Blakiston, 1873.

It is hardly necessary for us to give a complete review of this elegantly printed and illustrated work, which is got up and issued in a *superior style.* It is dedicated by the authors to Wm. Sharpey, M. D., L. L. D., F. R. S., whom they call the "main stay of Physiology in England."

The four authors, whose names are given above, are either masters of, or have greatly identified themselves with, the subjects of which they treat, having devoted themselves to the larborious investigation of each physiological detail—involving manipulation, vivi-section, chemical analysis, researches by the aid of the microscope, etc., and they present us with a collection of the most erudite and valuable practical treatises which can be found in the English language on the respective sub-divisions of labor over which each presides. In these the *methods, apparatus, expedients,* illustrated by a profusion of elegant plates, are given in full.

The book is not a treatise on Physiology in the ordinary sense of the term, as is usual among text books on this branch of medicine. It is filled with practical detail and minute instruction with regard to the methods of Physiological investigation with plates and diagrams, illustrating the minutest detail which constantly appeal through the eye to the understanding, so as to enable the working Physiologist or the student of Physiology to pursue with the greatest advantage the varied and complex researches required at his hands. Hoppe-Seyler, Beale, Virchow, Bernard, Brown Sequard, and other able and original investigators, have published

volumes, which are justly prized, and must be in the hands of the student and professional man; but this book cannot be dispensed with.

We have had occasion, at different periods, in our own rough and imperfect way to search for information to aid us in investigating some of the facts treated of in these volumes, and we can, if very feebly, appreciate the inestimable value of such a hand-book. Let us cite, for example, the nature, detection and analysis of bood, corpuscles, blood stains in criminal cases; the isolation and examination of the structure of the malphigian tufts with the microscope, the form, character, and compositions of urinary deposits, tube casts, etc., etc. These constitute but a tithe of what is treated of, for we have presented here chapters illustrating and describing Epithelium and Endothelium, Connective Tissues, Muscular Tissue, Tissues of the Nervous System, the Vascular System, Organs of Respiration, Embryology, Animal Heat, Electric Currents of Nerves, Reflex Action, Chemistry of the Tissues, Digestion, the Secretions, etc., each section of which presents also a vast amount of special physiological knowledge, at the same time that the processes by which it is arrived at are furnished. We would desire to see this book greatly enlarged in size, and would gladly make a few extracts to show those of our readers who are interested in such studies, the manner and style used in the treatment of the subjects embraced in it.

ART XI.—*A Hand-Book of Medical Electricity.* By HERBERT TIBBETS, M. D., L. R. C. P., London; Medical Superintendent of the National Hospital for the Paralyzed and Epileptic, &c., &c.

Electricity is generally recognized as a potent remedial agent, but its true value has never been definitely fixed. It has had its periods of popularity and of unjust aspersion. Some of the best minds in the profession have struggled to unravel its mysteries, and to fix the estimate of its therapeutic value; and again charlatanry has seized upon the obscurity of its subtle power, and used it for its own advantage. But if its true relation to medicine is far from settled, we may rejoice to know that there are able workers now in the field, promising further to elucidate its mysteries, and, we hope, to wrest it from the hands of empirics, unto whose care it has of late been too exclusively assigned.

We have at present reached a new age of its popularity, and expectation is, if anything, too high in regard to the power of its wonderful resources.

The tendency is rather to force upon us its use, even where we can well afford to do without it, and to affirm its positive curative results in diseased conditions admitted to be scarcely, if at all,

within the control of medicine or surgery. Such enthusiasm, or such charlatanry, will serve in time only to bring about another reaction, and induce too great apathy, or even disbelief, as to its positive value.

One reason why electricity has not been more used by the practitioner is, that it has ever been encumbered with theories, and out of the warm disputations of the electro-physiologists, the glimmerings of truth have been feeble and hard to establish. The very nomenclature of the subject has been a difficult study, and varied and disputed powers of the remedy claimed by opposing advocates to attach to the mere varieties of the force, have thrown a doubt upon the value of the force itself.

Another reason is the complication and expense attaching to the instruments in use. This has debarred experiment, and as therapeutics advances mainly, or most certainly, through acquired empirical knowledge, there has been presented an obstacle to progress not easily overcome.

Things have somewhat improved, and books like the one now before us promise well, because of their simplifying the whole matter.

Mr. Tibbits has done his work well. He has given a concise, but clear, and, for the every day practitioner, ample account of electricity and its uses. The nomenclature is made easy; the more important instruments well described, together with the means of using and keeping them in order.

For the therapeutic application of the agent, the practitioner will find simple directions for dealing with the varied forms of disease for which the remedy has reputation. Nor do we have the usual exaggeration or excess of enthusiasm that commonly attaches to specialists. On the contrary, we have a record of simple experience, a frank exposition of what is and what is not to be expected from the use of the remedy.

As a *Voltaic Battery* for medical purposes, supplying both a *continuous* and a *constant* current, Mr. T. recommends the *Becker-Muirhead Battery*, a modification of *Daniell's*, that is usually employed for telegraphic purposes.

This is however not portable. Where the portable battery is required, he has found one made by M. Foveaux, of the firm of Messrs. Weiss & Co., London, to answer perfectly.

Among the *Magnéto-Faradic* or *Volta-Faradic* instruments for inductive electricity, one of Stöhrer's, large or small, batteries is to be preferred.

For ordinary purposes of diagnosis and treatment, as needed by general practitioners, we are referred to a combined *Voltaic* and *Faradic Battery*, recently manufactured by Messrs. Meyer & Meltzer, of London. The prices of this instrument are £12 12s., and £10 10s.

For continuous work, it is, however, considered better to use separate instruments.

In the chapter on *Electro-Therapeutics* we have given the peculiar views and method of Dr. Radcliffe, and an account of what he calls his "*Positive Charge.*" This special method of electrization Mr. T. thinks "has in it very much to recommend it both in theory and practice." The conclusion of Dr. Radcliffe is that the primary condition of animal electricity is *not current, but static.* "The state of muscle and nerve during rest, is that of *charge;* during action, of *discharge.*"

The conclusions of Dr. R. are applicable to *voltaic* as well as *statical* electricity. This "acts upon irritability, not by its current so much as by *the charge associated with this current,* which charge may be made positive or negative, by putting an earth-wire to one or other of the poles." A part of the body may be "*charged* with positive electricity if an earth-wire be put to the negative pole, or with negative if an earth-wire be put to the positive pole; and the conditions are favorable to irritability in the former case, unfavorable in the latter." The establishment of such facts may lead to important practical results.

We regret that want of space will not permit a more extended notice of this excellent little book. The printing and illustrations are admirably done, and do credit to the Messrs. Lindsay & Blakiston, the American publishers.

ART. XII.—*A Hand-Book of Post-Mortem Examinations and of Morbid Anatomy.* By FRANCIS DELAFIELD, M. D., Curator to Bellevue Hospital, Pathologist to the Rosevelt Hospital, &c., &c. 8 vo., pp. 376. New York, William Wood & Co., 1872.

The volume before us fills a want which we are sure has been very often felt by a very large number of physicians, and more especially to the great majority of country practitioners and hospital *interns*, who are mostly new-fledged graduates, having had limited experience in the dissecting room, and whose opportunities for witnessing post-mortem examinations, before entering upon the active duties of practice, have not qualified them for adopting the readiest method of making a thorough inspection of the dead body, or of appreciating properly and quickly, the morbid changes resulting from disease.

Dr. Delafield in his preface states that " this work is intended to serve as a guide for those persons who may be called upon to perform post-mortem examinations." * * * * * "It is not proposed to offer a complete treatise on pathological anatomy nor medical jurisprudence, but rather a work which bears the same relation to them that a dissecting manual does to a complete anatomy." "The book is divided into four parts. The first gives the method of performing autopsies on the bodies of adults and of

young children. The second gives in detail the lesions which have been observed in each organ of the body. The third gives the lesions which are found after death from general diseases, from violence and from poisons. The fourth gives a short classification of tumors."

We propose to consider briefly the subject matter of one or two of these sections. Part I, on the method of making post-mortem examinations, comprises some observations upon the object of making autopsies, viz.: "To determine whether a person has died of violence or poison, to account for a sudden death, or to study the lesions of disease;" it also insists upon the necessity of examining the whole body, and not merely the suspected organ, and urges in all cases where the cause of death cannot be satisfaciorily determined from the inspection of the different organs, the propriety of avowing "our ignorance," instead of attributing death "to a congestion of the brain, or a disease of the kidneys, which does not exist:" all of which we heartily concur in, but we fear that most physicians, particularly before a coroner's jury, employed for the express purpose of assigning "the cause of death," would find it hard in a dilemma of this kind, not to associate death with some of the various congestions, which are popularly thought to cut off life suddenly.

Directions are given for external inspection of the body, as to changes commonly met with in death from different diseases: the effect of heat, cold and moisture upon the body are described; the rapidity of these changes under certain conditions: the rapid decomposition of the bodies of infants, as compared to those of adults "Atmospheric air, moisture and warmth, quicken decomposition. At the same temperature, a body which has been for one week in the air, one which has been two weeks in water, and one which has been eight weeks buried in the usual way, will all exhibit the same degree of decomposition."

The presence of Rigor Mortis as a sign for determining the probable date of death "is not reliable, owing to the uncertainty of its commencement, degree and duration, whether death arises from violence, or disease, from poison, suffocation or lightning."

The temperature of the body, before and immediately after death, the influence of the cause of death, whether from violence, hemorrhage or disease, is referred to. Some useful hints are given about the appearance of contusions, bruises, wounds, fractures and scars and the mode of examining them, with a view of determining whether they were inflicted before or after death, the importance of which in all medico-legal cases should be fully appreciated.

The mode of making a systematic internal examination of the body is next considered, commencing with the head, brain and its membranes, spinal cord, the thoracic organs, the pharynx, larynx, and œsophagus, the abdominal and genito-urinary organs.

In detailing the mode of exposing the different organs, and the

manner of preserving specimens for future microscopical and chemical investigation, some practical directions are given, which will be found useful by those not familiar with these subjects. Thus, in inspecting the spinal cord, where disease is suspected, and no lesions are to be seen by the naked eye, "the cord should be cut into pieces an inch long; these pieces are to be loosely tied in their order with a cord, and suspended in a jar containing a solution of Potass. Bichrom., 15 grains to one ounce and a half of water. After remaining in this for ten days, the cord should be removed to a solution of Ac. Chromic, 2 grains to one ounce of water, and remain in this until hard enough to be cut into thin sections."

The following method of determining the sufficiency of the valves of the heart is given: "To determine the sufficiency of the valves of the aortic and pulmonary valves, a full stream of water is poured into the aorta and pulmonary artery, and we observe how well the valves support the column of fluid." "To ascertain the sufficiency of the mitral and tricuspid valves, the auricles are first laid open so as to expose the upper surface of the valves. A large pipe is passed through the aorta or pulmonary artery, beyond their valves, and a moderate stream of water allowed to flow into the ventricles. The auriculo-ventricular valves will be swollen outwards, and we observe the degree of their sufficiency. The tricuspid valve is normally somewhat insufficient." "To examine the lungs microscopically, we make sections of the fresh lung with a double-bladed knife, or small pieces of the lung are placed in alcohol (95 per cent.) and kept there, changing the alcohol from time to time, until they are hard enough to be cut by a razor."

Considerable space is devoted to the minute anatomy of the kidneys; attention is called to the method of instituting a supercial examination, with directions also as to the proper manner of proceeding in cases requiring microscopical examination.

The abdominal and genito-urinary organs are next considered; and Part I. is concluded by a description of the method to be adopted in the examination of the bodies of the new-born infant, an attentive perusal of which will well repay the reader. It embraces external inspection of the body, describes the size and dimensions of the foetus in the successive stages of uterine development, its weight, the organs most prominently developed, the condition of the umbilical cord under varying circumstances, &c., &c. Lastly, the internal examination of new-born infants is described in the same order as that of the adult, and attention is called to the changes in the size, weight, position, form, and other differences existing in infantile and adult age.

Part II. comprises a brief, but comprehensive sketch of the morbid anatomy of the different organs, commencing with the nervous system and its membranes, and successively treating of the respiratory and vascular systems, and the genito-urinary apparatus and their several subdivisions, male and female. We commend the whole

of this division; it contains a great deal of information carefully arranged upon the various subjects under consideration.

Part III.—Lesions found in cases of general diseases and of violent death. This division embraces many subjects of great interest, not only to the pathologist, but to the general practitioner.

In reference to death from poisoning, the author gives very careful directions for the guidance of the physician as to the manner of making and recording every circumstance in connection with the examination, and the best means of preserving specimens for future analysis by the chemist.

Part IV. concludes the volume, and treats of tumors. The classification and names, with some modifications, are those of Virchow, which have been generally adopted by most pathologists of the present day. It is a concise and well arranged chapter, setting forth the prevailing opinions upon an intricate and difficult subject, which unfortunately are destined to be subjected to many modifications.

In conclusion, Dr. Francis Delafield deserves, and we believe will receive, the thanks of the profession for presenting us with a useful little volume. Its preparation has cost him study and labor; he will not regret the time he has expended upon it. To the inexperienced postmortemist it will be invaluable: to those who have been already "in harness," it will serve as a medium for ready reference. It is not a complete treatise upon morbid anatomy, but it contains a good summary of certain pathological conditions which are met with, and which are now recognized. It gives full explanations for conducting post mortems, and directions for preserving specimens for future microscopical examination. It will prove a valuable acquisition to the libraries of physicians, and particularly to hospitals, where principals and internes are intent upon work, and who desire to study disease through the only correct medium, that of post mortem examination.

ART. XIII.—*A Contribution to the History of the Fresh Water Algae of North America.* By HORATIO C. WOOD, Jr., M. D., Professor of Botany and Clinical Lecturer on Diseases of the Nervous System in the University of Pennsylvania, Physician to the Philadelphia Hospital, &c.

(*Smithsonian Contributions to Knowledge*, 241.)

This is a large quarto work, lately issued by the Smithsonian Institution, containing 202 pages of descriptive text, and 19 large colored and 2 uncolored plates of plants, drawn from nature by the author—a valuable and interesting addition to an obscure department of Botany, which has been neglected in this country. It is to be regretted that Dr. Wood's professional studies have inter-

fered to draw him away from this important field of research which he has so auspiciously commenced.

He has described about 400 species, and given drawings and illustrations of 177, but these minute forms of vegetable life are so abundant and so widely diffused, that this may be considered only an introduction to a subject not easily exhausted.

In that frontier region, where animal and vegetable life seem to blend and intermix—where often we find the ordinary characteristics reversed, the animal, fixed and stationary, and the vegetable, endowed with motion—where the commencement of cell-life is so similar in both, that in many cases it is impossible to pronounce upon the status—where in protoplasm and other primitive forms of plastic organic matter, we catch glimpses of the primordial state of organized bodies, and, as some contend, see the organic developed out of the inorganic, there is an indescribable chasm to the student of nature. With the progressive improvement of the microscope, the horizon of vision becomes extended, and we are admitted, as it were, into the very Laboratory of Nature, when, if ever, it is to be revealed to the restless search of man, that great "mystery of mysteries," the beginning of life, may be discovered.

This intense curiosity for mere knowledge has given an impetus to the study of these minute forms, where formerly all was beyond the reach of ordinary vision.

With respect to this particular department of Botany, we let our author make his own introduction:

"Although beset with difficulties in the outset, no branch of natural science offers more attractions, when once the study is fairly entered upon, than the fresh water algae. The enthusiasm of the student will soon be kindled by the variety and beauty of their forms and wonderful life processes, and be kept alive by their abundance and accessibility at all seasons of the year; for unlike other plants, the winter with them is not a period of counterfeited death, but all seasons, spring, summer, autumn and winter, alike have their own peculiar species. They have been found in healthy life in the middle of an icicle, and in the heated waters of the boiling spring; they are the test of life alike in the eternal snow of the mountain summit and the super-heated basin of the lowland Geyser.

In their investigation too, the physiologist can come nearer than in almost any other study, to life in its simplest forms, watching its processes, measuring its forces and approximating to its mysteries. Sometimes, when my microscope has revealed a new world of restless activity and beauty, and some scene of especial interest, as the impregnation of an œdogonium has presented itself to me, I confess the enthusiastic pleasure produced has been tempered with a feeling of awe.

To any one whom, through the want of a definite pursuit, the hours hang heavy, to the physiologist who desires to know cell-life,

to any student of nature, I can commend most heartily this study as one well worthy of any pains that may be spent on it.

An aquarium will often in the winter time, give origin to numerous interesting forms, but it is not a necessity to the fresh water algologist; besides his microscope and its appliances, all that he absolutely needs is a few glass jars or bottles, and the fields and meadows of his neighborhood.

The great drawback to the investigation of these plants has been the want of accessible books upon them. In the English language there is no general work of value, and the various original memoirs are separated so far and wide in the Continental and English journals, as to be of but little use to most American readers. The *Flora Europoeum Algarum Aquæ Dulcis et Submarinæ* of Prof. Rabenhorst has done much to facilitate the study, and its cheapness brings it within the reach of all. It merely gives, however, brief dignosis of the various species, but with the present memoir will, I trust, suffice for the American student, at least, until he is far advanced in his researches." H. W. R.

QUARTERLY SUMMARY.

Abstracts, Translations, Etc., from Foreign and Domestic Journals.

MATERIA MEDICA, GENERAL THERAPEUTICS AND PHARMACY.

Oxide of Zinc as a Remedy for the Diarrhœa of Infancy and Childhood.—Dr. Brakenridge states that during the last three years he has carefully tried various methods of treatment in many hundreds of cases of diarrhœa of infancy and childhood, at the dispensary of the Edinburgh Royal Hospital for Sick Children.

The considerations which have led him to adopt this remedy may be briefly stated as follows: First, the disease depends chiefly on a weak and too impressionable state of the nerve-centres presiding over alimentary secretion; secondly, it is correlated to convulsions and other spasmodic diseases; thirdly, it is accompanied by hyperæmia of the secreting surfaces of the alimentary canal. To meet these indications we must have a remedy, which is firstly tonic; secondly, antispasmodic; thirdly, astringent. In the oxide of zinc we have these three properties happily combined. First: as a tonic, it has been said to be to the nervous system what iron is to the blood. Its usefulness in the analogous condition of profuse sweating is well known. Secondly: as an antispasmodic, it is de

servedly held in high estimation, and has been found frequently to effect a cure in convulsions and other spasmodic diseases. It may, therefore, be depended upon to prevent the occurrence of those nervous diseases which stand correlated to diarrhœa as the alternative results of such irritations as dentition, worms, &c., and which may supervene on the rude stoppage of diarrhœa by astringents. Thirdly: its astringent properties are well known.—Medical Times and Gazette, Feb. 1873.

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Disinfectant.—Dr. MUSCROFT, of Cincinnati, Ohio (The Clinic, Feb. 15, 1873), recommends a disinfecting lotion composed of 1½ ounce of the bicarbonate of soda and 1 ounce of powdered alum, dissolved in water. He uses this mixture for every kind of sloughing sores.—Medical Record, June, 1873.

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Hydrate of Chloral in Incontinence of Urine.—Dr. GIROLAMO LEONARDI has found chloral a most valuable remedy in nocturnal incontinence of urine. The dose for children is from five to ten grains taken in water before going to bed. For adults the dose is proportionately larger. The treatment has been successful in all of his recorded cases. The remedy must be repeated for several successive nights.—Lo Sperimentale, April, 1873.—Medical Record, June, 1873.

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Treatment of Whooping-Cough with Quinine.—Dr. DAWSON, in a paper on this subject (American Journal of Obstetrics), says that the failure of quinine against pertussis, in the hands of others, is undoubtedly to be attributed to its administration, either in large doses at long intervals, or in the form of pills. He invites the profession to give to this treatment of pertussis a careful trial, feeling convinced that, if the following rules be carefully observed, few, if any, will be disappointed. 1. Give the quinine (sulphate or hydrochlorate) dissolved by acid in pure water only; for children under three years, from 5 to 8 grains, and for older children and adults, 10 to 12 grains, to the ounce. 2. Give not less than a teaspoonful every hour, or, at the longest, every two hours, during the day, and whenever cough comes on in the night. 3. Give nothing afterwards for some minutes to destroy the taste or to wash out the mouth. 4. Continue giving it, notwithstanding the first doses may be vomited. 5. Be sure that the quinine is pure and thoroughly dissolved. He attributes the rapid cure effected by quinine, not to the simple destruction of the fungus, but also to its nauseating bitter taste. The effect of a small amount of a solution of quinine, when taken into the mouth and swallowed, is instantly, from its bitter and nauseating taste, to excite a free secretion of thin mucus from the buccal mucous membrane and the salivary glands; and this softens and renders easy of dislodgment the tenacious mucus secret-

ed from the mucous membrane of the pharynx. The frequent repetition of the quinine keeps up this free secretion, and thus prevents the mucus from becoming tenacious and difficult of dislodgment. At each act of coughing, therefore, the accumulated mucus is readily loosened and expectorated, and unobstructed inspiration is obtained.—British Medical Journal, May, 1873.

MEDICAL PATHOLOGY, THERAPEUTICS AND PRACTICAL MEDICINE.

Liquor Ferri Chloridi in Small-Pox.—Dr. SILBERGLEIT states (*Berliner Klinische Wochenschr.*, December 9, 1872) that he and many other physicians of his neighborhood have used with excellent results this preparation in cases of small-pox, where the affection of the throat was one of the worst symptoms. He administers twenty to thirty drops with glycerine every hour. The treatment convérts the pocks in the mouth and throat into dry scales, and considerably reduces the swelling and hyperæmia.—London Medical Record, January 29, 1873.

Cause of Yellow Fever.—We find the following in the interesting commemorative Discourse on the Character of Samuel Jackson, of Philadelphia, by Professor Jos. Carson: "It is an interesting fact in the history of the medical profession of Philadelphia, that an association sprang up in 1799 which was called the 'Academy of Medicine,' and that it had as its founders men who advocated the non-imported and non-contagious origin of yellow fever. Among these were Physick, Dewees, Coxe, Caldwell, and, subsequently, Rush, who had become a convert. This institution was in antagonism to the College of Physicians, in which body the contrary doctrines had their warmest supporters. Before the Academy of Medicine Dr. Jackson read his papers, in 1820. By indefatigable perseverance, and by tracing reports and common rumor to their very source, he had determined that the epidemic of 1820 had not been imported, but that its origin was domestic and local. At the localities where it prevailed he found abundant sources of production in accummulated filth and putrescent animal and vegetable material, and could discover that in no case where individuals laboring under the disease were removed did they propagate it by infection, nor by the sick was it communicated to attendants or relatives who had not been exposed to the same local influences.

"The measures which were adopted under his guidance were the removal of all the inhabitants of the infected districts to more salubrious positions, the barricading by fences the localities in which the disease originated, and, as far as practicable, removing offen-

sive matters. In consequence of the measures of the Board of Health, the City Councils were induced, with the aid of the leading medical bodies, to devise such sanity measures as would prevent a recurrence in future of this calamity. But once since, in 1853, has yellow fever appeared in Philadelphia, and then it was suppressed by prompt and effectual measures.

"It may be stated that, while the source and cause of the 'black vomit' of yellow fever were subjects of conjecture rather than of scientific research, at the time Dr. Jackson's paper was written, he attributed it to hemorrhage, not to secretion—a view that in latter times has been subjected to the full test of chemical and microscopic examination, and has acquired the force of demonstration."

Treatment of Cerebral Exhaustion.—In his Croonian Lectures, lately delivered, Dr. RADCLIFFE, after describing the principal symptoms of cerebral exhaustion, as failure of memory, depression of spirits, increased or diminished sleepiness, unusual irritability, a continued craving for food or for stimulating drinks, lessened locomotive power, lessened control over the bladder, diminished sexual activity, inequalities of circulation, and aged aspect, disposition to tears, yawning, occasional faintness, epileptiform symptoms, or transitory hemiplegia, or coma, proceeds to consider its prevention and treatment. In diet, he thinks that the present system of urging persons at all weakly, especially children, to eat as much as they can, may have not a little to do in causing the development of many nervous diseases. He is equally opposed to persistence in "training diet" and to Bantingism, believing that the nerve-tissues as well as others may be effectually starved by excluding the hydrocarbons from the food. He further thinks that too much stress is ordinarily laid upon the importance of walking exercise; much walking, in fact, seeming to be no insignificant cause of the breakdown in the patient's health, and little or no progress is made until he begins to economise his strength in this direction. He is also disposed to maintain that rest from head-work may be too much insisted upon in cerebral exhaustion. He is satisfied he has often met with patients with jaded brains who have certainly let their minds lie fallow too long. Mere distraction is not enough. What is wanted generally, even at the beginning, is not that work should be given up altogether, even for a short time, but that it should be moderated in amount or changed. He is of opinion that the wakefulness may be much better combated by attention to the position of the head in sleep than by narcotics. Sleep in bed is, as a rule, sounder with a low pillow than with a high one. On the contrary, if there be undue sleepiness, the head should be kept high.—British Medical Journal, April 11, 1873.

Treatment of Psoriasis with Acetic Acid, by Dr. Buck.—The exact method of making this application is as follows: First the

[illegible] with soft soap and warm water until different portions of the diseased skin are [illegible] with which is to be painted on by means of a camel's hair brush. The extent of skin which can be thus treated in this manner will depend very much upon the sensitiveness of the patient to the action of the remedy, its ability and willingness to endure the [illegible] smarting which would appear to be the means employed. As the patient becomes more tolerant of this action the applications may be made more frequently, and a larger area may be painted at one sitting. As the result of the application of this agent the tissue becomes white and waxy in appearance while the surrounding skin becomes red and inflamed, all of which is attended by a more or less severe smarting, which usually continues in the course of fifteen minutes. The layers of epidermis which at first are rendered white by the action of the agent soon assume the character of thin horny scales, which in a few days either fall off of themselves or are readily detached, after which the application of the acid is to be repeated. If the smarting continue for any length of time, or if a severe irritation of the surrounding tissue be produced, as manifested by extensive swelling and redness, the treatment is to be suspended for the time being, and some soothing application, such as cerat, is to be made to the irritated tissue. The acid may be applied in this manner from two to three times daily, as the patient may wish, until the diseased and thickened tissue is entirely removed, and its place supplied by a smooth cicatrix of the natural color. No scar remains upon the affected spot. In cases of long standing, a brown pigmental pigment may somewhat discolor the skin for a time, but even this disappears after a while, which in cases where the psoriasis has had its seat upon the face is a matter of no little importance to the sufferer. Upon the healthy tissue the acid has little or no effect, acting merely as a stimulant. The time required for the accomplishment of a thorough cure varies from four to eight weeks, depending upon the degree of vigor and persistency with which the treatment is applied, and also upon whether the eruption is of long or short duration.—New Remedies, vol. x. No. 3, January 1875. Boston Medical and Surgical Journal.

Hyperthermia.—Dr. [illegible] Chicago Journal of Nervous and Mental Disease, 1873, p. 515-520) Cincinnati Lancet, 1874, p. 371 recommends local application of heat in typhoid by means of ice-bags to the back and to the abdomen. He says this method is more agreeable and less troublesome to the patient, and diminishes the average daily temperature in the axilla more than full baths of 60° temperature and ten minutes duration every two hours.—Boston Medical and Surgical Journal, April, 1875.

To Prevent the Formation of Pustules in Small-Pox.—Dr. Re-

VILLOD, of Geneva, who has made a special study of the various means hitherto tried for preventing the development of small-pox pustules in the face, now adopts as his favorite formula: soap, ten parts; glycerine, four parts; triturate, and add mercurial ointment, twenty parts. This ointment does not prevent swelling of the face, causes no pain, and prevents pustulation. It must be applied before the pustules have been transformed into vesicles.

On Enlargement of the Tonsils as a Cause of Nightmare.—J. WARRINGTON HAWARD, F. R. C. S., Assistant Surgeon to the Hospital for Sick Children, in the British *Medical Journal* for June, remarks as follows: "It is worth while, therefore, I think, when a child suffers from night terrors, to inquire into the state of the tonsils as a possible cause. The kind of nightmare thus produced seems to differ from that having its origin in gastric irritation or dentition chiefly in this: that whereas this last kind occurs, as a rule, only once in the night (as Dr. West points out), and the child then sleeps quietly, that due to enlarged tonsils, especially when the attacks are worse, often recurs several times in the same night, and is invariably observed to be aggravated by the child catching cold."

Medicine for Children.—In prescribing for children, the proper dose of a medicine cannot always be calculated according to the age of the child, and does not in all cases bear the same proportion to the quantity suitable for an adult. For certain drugs children show a remarkable tolerance, while to the action of others they show as remarkable a susceptibility. Thus, opium, it is well-known, acts upon a child more powerfully than would be expected, judging from the mere difference of age. It should, therefore, be given to infants with a certain caution, especially if the child be enfeebled by disease. It is, however, a medicine which is of especial value in the treatment of the disease of infancy, and may be given without fear if care be taken not to repeat the dose too frequently. Belladonna, on the contrary, can be taken by children in large quantities. A child of two or three years old will bear without inconvenience a dose which in an adult might produce very uncomfortable symptoms. Lobelia, again, is a remedy which is very well borne by children. Dr. Ringer has given it to "very young children" in doses of five minims every hour, and in no case has he noticed any ill effects to follow its administration. Arsenic should be given to children over five years of age in the same dose as that used to adults, and infants of a month or two old will take one drop of Fowler's solution three times a day with great benefit in cases of gastric catarrh. The influence of mercury upon young children deserves remark. It seldom in them produces stomatitis or salivation; but an excess of the drug is not, therefore, harmless; its influence is seen in the irritation of the alimentary canal which it so often excites, and in the profound anæmia which it induces.

The anæmia which is so common a sequence of constitutional syphilis in infants is no doubt often a result of too long-continued mercurial treatment.—Med. Times and Gaz., April 12. 1873.—Dr. Eustace Smith of London.

SURGERY.

The Magnesite Dressing.—KUESTER, of Berlin, has (*Deutsche Klin.*, 12, 1873) employed this form of dressing for two years, and believes that in many cases it is superior to plaster of Paris. Magnesite is easily procured, as it is extensively employed by the manufacturers of artificial carbonic acid waters. It consists, in fact, of the neutral carbonate of magnesia, from which free carbonic acid is readily obtained by the addition of any strong acid. To one part of magnesite he adds three parts of soluble glass, which is composed of the silicate of soda and potash. Both are then mixed into a thin paste. The silicic acid unites with the magnesia, and carbonate of potash and soda are separated.

It is used in about the same way as the ordinary plaster of Paris dressing. The author usually first protects the part with flannel, and then takes linen bandages, soaks them thoroughly in the paste and applies them firmly. Two, or at most three, layers are all that are requisite. The parts must then be kept immovable from 24 to 36 hours, and the dressing will become as hard and unyielding as stone. Lightness, cheapness, and greater durability are some of the most prominent advantages claimed for this method. The author believes that it is far superior to plaster of Paris in certain cases, as in the treatment of chronic inflammations of the shoulder, knee, and ankle joints, in contractures of the knee, and in imperfectly united fracture of the femur.—Medical Record, May, 1873.

Aspirating Puncture in Strangulated Hernia —At the last meeting of the Société de Chirurgie, Dr. Dieulafoy communicated a paper on the above, in which he investigated successively these three points: 1. Is puncture of the intestine in strangulated hernia harmful, or of a nature to cause accidents or to compromise the success of other and ulterior curative means? 2. In what cases and at what time should aspiration be practised? 3. What should be the *modus operandi?* In answer to the first question, Dr. Dieulafoy stated that out of twenty-four cases now known, and including herniæ of all kinds, umbilical, crural, and inguinal, of more or less recent date, in not one instance had there occurred the slightest accident, and when kelotomy had been practiced on the spot, the pricks made with the needle could scarcely be found out. As to the question of opportunity or seasonableness, the author said that, aspiration being the most direct and efficacious auxiliary of taxis, rational treatment of strangulated hernia should, with some rare

NEW YORK MEDICAL

exceptions, invariably begin with puncture. In the twenty-four cases extant, and which had resisted forcible taxis, or repeated taxis with the aid of chloroform, aspiration had afforded sixteen cases of cure, and had in no way interfered in the other cases with the performance of kelotomy. As to the *modus operandi*, it was of the simplest: the needle (No. 1 or 2) is introduced through the skin after vacuum has been established, and aspirates all the liquid and gaseous matter which it meets, those of the intestine as well as those of the sac. The tumor collapses, and reduction is most readily accomplished. When the hernia is not reduced it shows that there exist adhesions; then it is needless to prolong taxis, and kelotomy must be practiced.—London Journal, May, 1873.

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An Improved Means of Plugging the Posterior Nares. By A. GODRICH, M. A., M. R. C. S.—The instrument consists of a small elastic bag stretched on the end of a hollow style, by means of which it is pushed through the nasal fossa into the pharynx. It is then dilated with ice-cold water by means of the ordinary ear-syringe, the nozzle of which is inserted into a piece of India-rubber tubing tied to the other end of the style. A small piece of thread or twine tied round this prevents the water from escaping. The bag, thus dilated, is now to be drawn well forward into the posterior nares, into which, by its elasticity, it will accurately fit. The anterior India-rubber plug is next to be slid along the style (this is more easily done if the style be previously wetted) into the anterior nares, which it fits like a cork. The cohesion between this plug and the style will, I think, be sufficient to hold both plugs in position; if not, a piece of string tied round the style in front of the anterior plug will ensure perfect security.

When it is necessary to remove the plug, all that the surgeon has to do is to cut the string tied round the piece of India-rubber tubing, when the water will be expelled by the elasticity of the bag, and the instrument may be removed without difficulty.—British Medical Journal, April, 1873.

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Therapeutic Memoranda.—On the use of a Sponge-tent in Epistaxis. By D. S. SKINNER, L. R. C. P. London, etc., Lynn Regis.—I immediately passed a large sized carbolised sponge-tent into the nose, leaving only the string visible to extract it. In a very short time the bleeding ceased; there was no recurrence of it during the night, and in the morning she extracted the tent herself with the greatest ease, and there was no hemorrhage afterwards. She complained of no inconvenience or disagreeableness whatever from the tent.—Br. Med. Journal, March, 1873.

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Sanderson on Secondary Inflammations.—With reference to the infective fever which accompanies the formation of secondary abscesses, the author holds: 1. That the fever is not the consequence

of the secondary suppurations, but that these are determined by the presence of pyrogenic material in the blood, which pyrogenic material is also the cause of the fever; 2. That the pyrogenic material is due to septic changes, which take their start in the original focus of inflammation, and are indicated by the presence of microzymes, first in the original focus of production in the blood, and in the secondary foci; 3. That the fever thus produced is identical with one of the forms of surgical or traumatic fever, but is entirely different from other forms, so that no inference can at present be drawn from the investigations hitherto made as to the nature of "surgical fever" in general.—British Medical Journal, May, 1873.

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A New Use for Old Stockings.—A plan of putting up simple fractures of the leg, which is not, we believe, generally known, and which country surgeons may sometimes find convenient, has lately been practiced at University College Hospital. The broken limb is first bandaged with an ordinary roller; this is well coated with the gum and chalk mixture; a stocking is slipped on over this and similarly coated; another stocking is put on over this; and a final layer of gum and chalk over all. Thus, for a case of transverse fracture with little displacement, or of fracture of one bone, two or three stockings and a little starch or plaster of Paris supply a very neat and serviceable splint.—British Medical Journal, May, 1873.

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Injection of Alcohol into Tumors.—C. SCHWALBE, who has already advocated the treatment of bronchocele by the injection of tincture of iodine and of alcohol into the areolar tissue, describes in Virchow's *Archiv*, vol. lvi., part 3, a case of lipoma successfully treated by the same plan. In the course of eleven weeks, he made eighteen injections of alcohol into the tumor. The result was, that it became reduced to one-half of its original size, and hardened. Finally, Schwalbe induced suppuration by injecting caustic potash with the alcohol. On this, however, the patient ceased attendance. He concludes that atrophy of lipomata may be produced by cicatricial contraction, although more slowly, and perhaps less constantly, than in strumous swellings; and he suggests that, in cases of large and very vascular lipoma, the injection of alcohol may be employed as a means of reducing the size of the tumor and diminishing the risk of hemorrhage when an operation is performed for its removal. The good effects that have been ascribed to the injection of ergotin in cases of aneurism and varix he believes to be due not so much to any action of the ergotin, as to the contraction of the cicatricial tissue resulting from the inflammation; and hence, he believes, alcohol is a more efficient remedy in such cases than ergotin.—Wiener Medizin, Wochenschr., April 19th.

MIDWIFERY AND GYNÆCOLOGY.

The Connection between Laceration of the Perineum and Prolapsus Uteri. By ALEXANDER MILNE, M. D.—We associate these two articles together, as evidence of the entirely opposite views held by careful observers upon the action of the vagina, sustained by the perineum in giving support to the uterus, the former teaching that rupture of the perineum "is not a cause of prolapsus, or procidentia uteri;" that "the perineum has nothing to do with the maintenance of the uterus in its natural position," and that the only influence a rupture can have is to favor a more direct procidentia, in cases where the causes for the displacement are in action. Dr. Milne takes a directly opposite ground, maintaining "that the perineum in its normal state does aid in supporting the uterus, and when lacerated, favors the descent of that organ," and "that rupture favors prolapsus uteri by destroying the curvature of the vaginal canal, and making it approach the perpendicular." Various arguments are adduced by each writer in proof of his own particular views and opinions, and the Society appears to be very much divided upon the question—Drs. Keiller, Bell, James Young, and Cuthbert, rather favoring the views of the former, and Drs. Ritchie, Gordon, Murray, and Bruce, those of the latter.—Transactions of the Edinburgh Obstetrical Society.

On the Use of the Constant (Voltaic) Current in Pains of a Pelvic Character. Dr. WILLIAM STEPHENSON, in the Transactions of the Edinburgh Obstetrical Society, observes:

"One of the most important questions in practical medicine at present under discussion, is that regarding the influence of the constant current of electricity over pain. Having used the constant current for two years in a large number of different affections, I would lay before you the result of my experience, in so far as it relates to certain classes of cases which come more directly within the domain of this Society. The first class to which I would refer, is the sacral and iliac pains which are met with so frequently in practice. Many of them are purely neuralgic, others muscular, while some are a combination of both forms. Their connection in a large number of cases with some abnormal condition of the pelvic organs is undoubted, but it is no less true that they often persist long after the primary local cause has disappeared.

"The difficulty which we have had hitherto to contend with is, that we did not possess the means of acting directly and locally upon the weakened state of the sacral nerves, which is the true cause of the suffering, or of determining the relations between the pain and the pelvic change. Here, however, the constant current of electricity steps in. Its effect in alleviating pain affords immediate relief, and by its restorative influence gradually removes the affection, while in it also we have the means of determining how

far any local mischief is acting as an exciting cause. In some cases where a cure cannot be looked for, great relief to suffering can be given more quickly and with better effect than by the use of anodynes."

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Criminal Abortion.—Professor T. GAILLARD THOMAS, in the *American Journal of the Medical Sciences* for April, 1873, reports an interesting case in which a wire 17½ inches in length, apparently a portion of an umbrella, was in a criminal attempt passed through the roof of the vagina, traversing the abdominal cavity, entering the lung and causing death, with pulmonary symptoms. The position of the wire was only detected after death. Shocking to relate, the husband of the woman claimed to be a physician, and was no doubt cognizant of, if not an actor in, the criminal procedure. We are interested to know if the culprit has been turned over to the prosecuting State officer.

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Flexions and Versions of the Uterus, with Mechanical Treatment of Uterine Deviations.—In an exhaustive article published on the above, by Dr. B. S. SCHULTZE, in the *Archiv fur Gynækologie*, the author puts down various conclusions, which may be summed up as follows: 1. The normal position of the empty uterus is anteflexion or anteversion. When a woman is in a standing position, the posterior surface of the uterus is turned upwards. 2. Anteversion and anteflexion must be regarded as pathological conditions only when the uterus is fixed in its vicious position, or limited in the movements which are communicated to the organ. 3. Thickening and shortness of Douglas's ligaments (the habitual consequences of parametritis) constitute the usual causes of the persistence of anteversion or abnormal exaggeration or anteflexion. 4. On the other hand, the lengthening of the same ligaments (through muscular weakness of the retractores uteri) necessarily leads to retroversion and retroflexion, of which it is the most frequent cause. 5. The line of flexion of the uterus follows exactly the primarily anterior or posterior surface of the organ. If the body of the flexed uterus is more or less deviated to the right or left, almost always there exists at the same time a rotation of the organ on its axis. 6. Pressure exerted on the abdominal viscera increases the following deviations: normal anteversion, or anteflexion of the empty uterus, abnormal flexion backwards (through posterior fixation), retroversion and retroflexion through laxity of Douglas's ligaments. 7. Uterine catheterism does not suffice for recognizing the normal situation of the organ, and the direction of its deviations. Palpation with both hands, properly effected, is a safer way of making out the diagnosis. 8. Persistent anteversion and anteflexion of the uterus can be combated with benefit only by the help of revolving agents that tend to cause the disappearance of the exudata which maintain the uterus in its vicious position. 9. Retroversions and

retroflexions, whilst they are yet reducible, must be treated by means of the hand, and not of the uterine sound; but in the greater number of cases it becomes necessary to have recourse to mechanical means for maintaining the uterus in its normal position—namely, slight anteversion. 10. The only rational means of overcoming displacements of the uterus backwards is retroposition of the vaginal portion. The innumerable intra-uterine pessaries used for the purpose do not generally contribute much to that effect; but the use of Dr. Schultze's modified vaginal pessary produces this result: when the vaginal portion is fixed behind, intra-abdominal pressure maintains the uterus in a position of normal anteversion. 11. Pressure exerted by the abdominal viscera is not capable of modifying flexion. When in such cases of flexion pain is abated by retroposition of the vaginal portion, it may be necessary to add an intra-uterine sound to the vaginal pessary.—London Lancet, May, 1873.

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Diseases of Children.—Scarification of the Gums.—Dr. J. LEWIS SMITH, in his *Treatise on the Diseases of Infancy and Childhood* (of which the second edition has lately been published in Philadelphia), says that the gum-lancet is now much less frequently employed than formerly. It is used more by the ignorant practitioner, who is deficient in the ability to diagnosticate obscure diseases, than by one of intelligence, who can discern more clearly the true pathological state. Its use is more frequent in some countries, as England, under the teaching of great names, than others, as France, where the highest authorities, as Rilliet and Barthez, discountenance it. It is well to bear in mind the remark of Trousseau, that the tooth is not released by lancing the gum over the advancing crown. The gum is not rendered tense by pressure of the tooth, as many seem to think; for, if so, the incision would not remain linear, and the edges of the wound would not unite as they ordinarily do by first intention within a day or two. If there be no symptoms except such as occur directly from the swelling and congestion of the gum, the lancet should seldom be used. The pathological state of the gum which would, without doubt, require its use, is an abscess over the tooth. As to symptoms which are general or referable to other organs, as fever and diarrhœa, the lancet should not be used if the symptoms can be controlled by other safe measures. All co-operating causes should first be removed, when, in a large proportion of cases, the patient will experience such relief that scarification can be deferred. If the state of the infant be such that life is in danger, as in convulsions, or there be danger that the infant will be permanently injured or disabled, as by paralysis, every measure which can possibly give relief should be employed without delay. In these dangerous nervous affections, therefore, the gums, if swollen, should be lanced.

EDITORIAL AND MISCELLANEOUS.

Increase in the Size of the Journal.

IT will be observed that in this issue we have increased the number of pages from eighty to one hundred. The favorable reception which the *Journal* has met with, together with our desire to furnish a large amount of material for our readers, have induced us to do this.

To Subscribers.

IT is our duty to remind our subscribers that the *terms of the Journal are invariably in advance*, which rule our necessities require us rigidly to adhere to. We hope that all dues will be promptly remitted.

To Contributors.

CONTRIBUTORS will please send in their communications at least one month before the issue of the *Journal*. Much interesting matter has, for want of space (notwithstanding the number of pages we have added to this number), been deferred for the October issue.

Professor E. S. Gaillard, M. D.,

OF the Louisville Medical College, and the able and well-know[illegible] editor of the *Louisville Medical Journal*, has, we are glad to pe[illegible]ceive, received the honorary degree of LL. D. from the Universit[illegible] of North Carolina. A compliment like this falls very rarely to th[illegible] lot of medical men at the South, for however distinguished, learn[illegible] or accomplished some of the oldest may be, such awards seem re[illegible] served by our Colleges and Universities for those of other profes[illegible] sions. Our appreciation of the Doctor will not permit us however to endorse entirely his late views on the subject of "Specialism," nor to consider him right or wise in aiding in the circulation of that "*slip*" from the Baltimore Eye and Ear Infirmary.

American Medical Association.

THE meeting of this body, in May last, at St. Louis, we are glad to learn, was a large and most useful one. Some changes in the organization and working of the body have been effected. The establishment of a "Judicial Council," with the view of hereafter excluding the discussion of questions likely to interrupt the harmony

of the proceedings, was an important step. The abolition of many of the "sections," not considered useful, and the making provision for Special Addresses on Medicine, Surgery, Obstetrics, Hygiene, Medical Jurisprudence, &c., were other valuable moves. Most of the changes were instituted by reason of the suggestions of the veteran surgeon, Professor S. D. Gross, of Philadelphia, to whose opinion the profession generally attach much weight. We are much pleased with the elevation of Dr. J. M. Toner, of Washington, to the Presidency. He has ever been devoted to the interests of the body, and is a gentleman fully qualified to adorn the position.

State Medical Association of South Carolina.

A VERY successful meeting was held in Charleston, and, after a long period of difficulty, we can at last congratulate the profession upon the firm establishment of this important organization.

The meeting was well attended by gentlemen from every portion of the State. President Darby's address and a large number of papers were listened to and discussed with great interest. Dr. R. A. Kinloch was recommended by the Nominating Committee for President, but as reasons of a private nature prevented him from accepting the high honor, Dr. Baruch, of Camden, was chosen to fill the place. We regard the selection as a most excellent one.

The Transactions are being rapidly printed and will be soon issued, when we hope to notice them farther. We add in conclusion, whatever may be said of the quality of the Transactions of our Association, that the North Carolina Medical Society far surpasses ours in the number of its members.

North Carolina and Georgia State Medical Associations.

A MEETING of the first named body took place lately, at Statesville, and was the most successful which has ever been held.

An interesting and full discussion between our friends Professor Satchwell, of Wilmington, and Dr. W. B. Norcom, of Edenton, took place, on the subject of the modern treatment of acute diseases, which was a special feature of the meeting. Dr. Norcom was subsequently elected President.

The Georgia Medical Association was also in session in April last, and we are pleased to learn that the proceedings were "entirely harmonious." By a "new and simplified constitution all probable sources of difficulty in the future have been removed." Dr. Westmoreland, of Atlanta, was elected President.

New Journals.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.—We take pleasure in stating that the publication of this journal will be re-

sumed July, 1873; issued every two months at $5; S. M. Bemiss, editor. We wish the *Journal* a prosperous career.

THE SANITARIAN.—This journal, devoted to sanitary science, health police of cities, etc., recently received, has been placed on the list of our exchanges. It is issued monthly—edited by Dr. A. N. Bell, of New York—at $3 per annum, and can accomplish a vast amount of good in the important work in which it is engaged.

THE OBSTETRICAL JOURNAL of Great Britain and Ireland, including Midwifery and Diseases of Women and Children, edited by J. H. Aveling, M. D., and Alfred Wittshire, M. D., with an American Supplement, edited by W. F. Jenks, is issued monthly by H. C. Lea, Philadelphia; $5 per annum. We have received the first (April) number of this journal, and have no doubt of the value which such a publication must prove to the medical profession. It is well printed and contains a number of interesting papers.

California State University.

WE learn from California papers that at the late annual meeting of the Board of Regents there have been made valuable donations to the Institution, and that a military and a medical department have been established.

Dr. Thomas M. Logan, of Sacramento, late President of the American Medical Association and a Carolinian by birth, has accepted the Professorship of Hygiene in the University. We have no doubt that he will fill the position very creditably. His new sphere of duties will not necessitate his leaving Sacramento.

Death of Dr. Josiah Nott, and Resolutions of Dr. Baldwin.

WE have received, through the kindness of our friend, Dr. R. F. Michel, of Alabama, a very appreciative and interesting sketch of the life of Dr. Nott, prepared by himself, which, had we space, we would gladly publish in full. The subjoined remarks of Dr. Baldwin, however, before the Medical Society of Montgomery, most eloquently expresses the high appreciation of the entire profession for the character of the deceased:

I rise, Mr. President, with no ordinary feelings of emotion, to bring to the notice of this Society the death of one of our most distinguished and esteemed members. Dr. Josiah C. Nott, an honorary member of this Society, died in Mobile on the 31st ult.

I hold in my hand a preamble and resolutions, which I deem appropriate to offer for your consideration. But before alluding in the formal manner of resolutions to the grief which this Society, as well as the profession and humanity at large may justly feel upon the occasion of the death of such a man as Dr. Nott, I would do violence to my own heart, to the emotions kindled by an unselfish and

bereaved friendship, did I feel personally the loss of this noble spirit whom I have so much loved.

I have known Dr. Nott for many long years. I have known him well, and I believe I may say without arrogance, that I have enjoyed his confidence and friendship to an extent that has not been accorded to many not living within his immediate vicinity. I well remember the beautiful and truthful eulogium pronounced upon his life and character whilst living, by one of our members, Dr. Williams, on the occasion of the presentation of his name for honorary membership in this Society, which might well be reproduced here as a fitting tribute to his memory. The present occasion, however, does not afford an opportunity to dwell at length upon his achievements in the profession of medicine which he has so much adorned and enriched, or of his just renown won in the fields of general science and literature, where he was also an earnest worker, and into whose storehouses he has emptied so many gems of thought and labor. His fame in all these departments is with the world and world-wide, and history will doubtless accord to him his just and proper sphere. But a man is often great and justly eminent outside of wisdom, talents, and works like these. These qualities attract our admiration, but do not always enlist our affections. It was in the world of lofty and noble sentiments that our friend's character shown most beautifully, and through which he won the veneration and love of all who knew him whilst living, and for which they will most deeply mourn him dead. The higher virtues of perfect truth, justice and sincerity, united with an integrity of purpose, a nobility of soul and chivalry of sentiment which knew no compromise—all combined to make him a model of almost perfect manhood.

But he is gone, and what I, or you, or the world, may think or say of him, cannot concern him now. Yet the friendship which valued his exalted worth, which felt proud of his love and confidence whilst living, and cherishes his memory since dead, may feel some consolation, as it dwells upon remembrance of his pure and spotless life, in the thought that so many virtues had gathered in a single heart, even though they all perished in a single death.

These were followed by several highly appropriate resolutions.

University of Maryland.

THE Chair of Professor of Eye and Ear Diseases, and Lecturer on Operative Surgery, has been divided. Professor J. J. Chisolm retains the Chair of Diseases of the Eye and Ear. To the Chair of Operative Surgery, Professor Allen P. Smith has been called. Professor Nathan R. Smith is now Emeritus Professor of Surgery and President of the Medical Faculty.

Obituary.

We have to notice, since our last issue, the death of the following distinguished men:

Baron Liebig, the world-renowned chemist.

Dr. Bence Jones, of London, one of the best authorities on medical chemistry.

Richard Partridge, M. D., for many years Professor of Anatomy in King's College.

Edward Latham Ormerod, of Brighton, England, well known for his labors connected with diseases of the heart.

M. P. Ch. Huguier, and Benoit Morel, the celebrated alienist physician of Paris.

Dr. John Torrey, of New York, who was associated with Professor Gray, of Cambridge, in the preparation of the *N. Am. Flora,* is also dead. He was for many years the highest authority on botany which this country has produced.

The very latest British journals record the sudden death at Richmond, by cerebral hemorrhage, of Dr. Tyler Smith, aged 59. He is accredited with having done more than any other to place obstetrics in a position to be recognized equally as a department of medicine with practical medicine and surgery.

Notice to Advertisers.

All advertisements and communications in reference to same, must be addressed to the Editors, or to H. P. Cooke, 52 Broad Street, Charleston, S. C.

We have established the following rates of advertising. *The Journal* has attained a circulation which places it on a sound basis, and is one of the most desirable advertising mediums in the South:

	Each Quarter.	*Yearly.*
One eighth of a Page	$ 4.00	$15.00
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Outside Cover or Back	30.00	80.00

BOOKS, PERIODICALS AND EXCHANGES RECEIVED.

Hand Book for the Physiological Laboratory. By E. Klien, M. D., etc., J. Burdon Sanderson, M. D., F. R. S., etc., Michael Foster, M. D., F. R. S., etc., and Landor Branton, M. D., D. G., etc. Edited by J. Burdon Sanderson. In two volumes, with 133 plates, containing 368 illustrations. Philadelphia, Lindsay & Blakiston. 1873 [From the publisher.]

Hand-Book of Medical Electricity. By Herbert Tibbits, M. D., L. R. C. P., London. With 64 illustrations. Philadelphia, Lindsay & Blakiston. 1873.

A Treatise on the Principles and Practice of Medicine, designed for the use of Practitioners and Students of Medicine. By Austin Flint, M. D., Prof. of Principles and Pract. of Medicine and of Clinical Medicine in the Bellevue Hospital Med. College. Philadelphia, H. C. Lea. 1873. [From the publisher. Will be noticed in the October number of this journal.]

The Mechanism of the Ossicles of the Ear and Membrana Tympani. By. M. Helmholtz, Professor Physiology in University of Berlin, Prussia. Translated from the German with the author's permission. By Albert H. Buck and Normand Smith, of New York. With 12 illustrations. New York, Wm. Wood & Co. 1873. pp. 69.

Report of Columbia Hospital for Women, Washington, D. C. By J. Harry Thompson, M. D. Surgeon in Chief, with an appendix. Washington, Government Printing Office. 1873.

Trade and Commerce of the City of Charleston from September 1st, 1865, to September 1st, 1872. Compiled by Chamber of Commerce. 1873.

Modification of the Obstetrical Forceps, with Practical Observations on their Application. By F. M. Robertson, M. D., Professor Gynæcology and Clinical Obstetrics, Medical College State of South Carolina. [Reprinted from the Journal of Obstetrics.] New York. 1872.

American Journal of Medical Sciences. H. C. Lea, Philadelphia. April, 1873.

The British Medical Journal. May and June, 1873.

Medical Times and Gazette. London. Saturday, May, 1873.

The Practitioner. May and June, 1873. Kelly, Piet & Co., Baltimore, Md.

On Ovariotomy. By J. Marion Sims, M. D. Reprinted from New York Medical Journal. December, 1872, and April, 1873. [From the author.]

Nashville Journal of Medicine and Surgery. June, 1873.

Journal of Materia Medica. Joseph Bates, M. D., and H. A. Tilden. New Lebanon, N. Y. June, 1873.

Insanity and Insane Asylums. Report of E. T. Wilkins, M. D., Commissioner in Lunacy for the State of California, made to his Excellency, H. H. Haight, Governor, December 2, 1871. Sacramento. [From E. V. Joye, M. D., of Dobbins' Ranch, Nevada County.]

The Action of the Intercostal Muscles. By Thos. Dwight, Jr., M. D., Professor of Anatomy Medical School of Maine. [From Boston Medical and Surgical Journal.]

Braithwaites' Retrospect of Practical Medicine and Surgery. January, 1873. W. A. Townsend, Publisher, New York. 1873. pp. 292.

Half Yearly Abstract of the Medical Sciences. Being a digest of British and Continental Medicine, etc. Edited by W. D. Stone, M. D. Philadelphia, H. C. Lea. January, 1873. p. 296.

Pacific Medical and Surgical Journal. H. C. Gibbons, M. D., and H. Gibbons, Jr., Editors and Proprietors. Vol. VI. May, 1873. San Francisco, Cal.

The Obstetrical Journal of Great Britain and Ireland. W. F. Jenks, American Editor. H. C. Lea, Philadelphia. May, 1873.

Journal of Applied Chemistry. New York.

Boston Journal of Chemistry. Boston, June, 1873.

Boston Medical and Surgical Journal. May and June, 1873.

The Medical Record. New York, May, 1873.

The New York Medical Journal. April, May and June, 1873.

The Cincinnati Lancet and Observer. June, 1873.

The Atlanta Medical and Surgical Journal. May, 1873.

The Medical Record. New York, April, May and June, 1873.

The Medical and Surgical Reporter, (weekly.) Philadelphia, April, May and June, 1873.

The Medical News and Library. Philadelphia, April, May and June, 1873.

The Buffalo Medical and Surgical Journal. 1873.

The Richmond and Louisville Medical Journal. May, 1873.

Bulletin de Gustave Bossange.

Bossange's Monthly List of New Works. Published in France. No. 16 Rue du ——, Septembe.

De la Composition des Eaux Minérales de Spa Rapport, etc. Dison, France, 1873.

The St. Louis Medical and Surgical Journal. June, 1873.

Transactions of the Medical Society of the State of California during the years 1871 and 1872.

Annual Address before the Sacramento Society for Medical Improvement. March, 1872. By F. W. Hatch, M. D.

Proceedings of the Agassiz Institute. Sacramento, California, March, 1873.

Address of Thos. M. Logan, M. D., President of the American Medical Association, delivered at St. Louis, May 6th, 1873. [From the author.]

Medical Education. An Address before the Society of the Alumni of the Medical Department of the University of Pennsylvania, March 12th, 1873. By Alfred Stillé, M. D. [From the author.]

Medical Department, University of Virginia. Announcement of Session, 1873–4. Charlottesville, Va.

An account of the Hot Springs, Bath Co., Va., (with a treatise by Prof. J. L. Cabell, of Univ. of Va.) Richmond, 1873.

Modern Medicine. A Lecture, Introductory to the Course, at the Jefferson Medical College, by J. M. DaCosta, M. D., Prof. Princip. and Practice of Medicine. [From the author.]

Lithotomy. Removal of Calculus mass deposited on a piece of Bougie, being the 90th bilateral operation, with only two deaths in the last forty-five cases By Paul F. Eve, M. D., Prof. Surg. Univ. of Nashville. Nashville, 1873.

Report of the Board of Health of City of Chicago, on necessity of extension of sewerage, by J. H. Rauch, M. D., Sanitary Superintendent. Chicago, 1873.

Normal Ovariotomy. Paper read before the Georgia Medical Association, 24th session, 1873, by Prof. Battey, M. D., Rome, Ga. Atlanta, 1873.

Annual Report of the Officers of the Alabama Insane Hospital at Tuscaloosa, year ending September, 1872. Montgomery, Ala., 1872.

Opthalmic and Aural Reports. By J. J. Chisolm, M. D., Prof. of Eye and Ear Surgery in the University of Maryland. Baltimore, 1873. [From the author.]

Intra-Ocular Enchondroma of 22 years South. Removed at Baltimore Eye and Ear Infirmary. By J. J. Chisolm, M. D., Prof., &c., New York. Wm. Wood & Co. [From the author.]

DRUGGISTS' DIRECTORY.

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UNIVERSITY OF PENNSYLVANIA, Medical Department, R. E. Rogers, M. D., Dean, Ninth Street, Philadelphia, Pa.
PHILADELPHIA MEDICAL TIMES, 715 and 717 Market Street, Philadelphia, Pa.
THE PRACTITIONER, 174 Baltimore Street, Baltimore, MD.

Subscriptions Received since April, and not otherwise Acknowledged.

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BELLEVUE HOSPITAL MEDICAL COLLEGE,

CITY OF NEW YORK.

SESSIONS OF 1873-1874.

The Collegiate Year in this Institution embraces a preliminary Autumnal Term, the Regular Winter Session, and a Summer Session.

The Preliminary Autumnal Term for 1873–1874 will commence on Wednesday, September 17th, 1873, and continue until the opening of the Regular Session. During this term, instruction, consisting of didactic lectures on special subjects and daily clinical lectures, will be given, as heretofore, by the entire Faculty. Students designing to attend the Regular Session are strongly recommended to attend the Preliminary Term, but attendance during the latter is not required. *During the Preliminary Term, clinical and didactic lectures will be given in precisely the same number and order as in the Regular Session.*

The Regular Session will commence on Wednesday, October 1st, 1873, and end about the 1st of March, 1874.

FACULTY.—ISAAC E. TAYLOR, M. D., Emeritus Professor of Obstetrics and Diseases of Women and Children, and President of the College; JAMES R. WOOD, M. D., LL. D., Emeritus Professor of Surgery; FORDYCE BARKER, M. D., Professor of Clinical Midwifery and Diseases of Women: AUSTIN FLINT, M. D., Professor of the Principles and Practice of Medicine and Clinical Medicine: FRANK H. HAMILTON, M. D., LL. D., Professor of Practice of Surgery with Operations and Clinical Surgery: LEWIS A. SAYRE, M. D., Professor of Orthopedic Surgery and Clinical Surgery; ALEXANDER B. MOTT, M. D., Professor of Clinical and Operative Surgery; W. H. VAN BUREN, M. D., Professor of Principles of Surgery with Diseases of the Genito-Urinary System and Clinical Surgery; WILLIAM T. LUSK, M. D., D. WARREN BRICKELL, M. D., Professors of Obstetrics and Diseases of Women and Children, and Clinical Midwifery; WILLIAM A. HAMMOND, M. D., Professor of Materia Medica and Therapeutics, Diseases of the Mind and Nervous System, and Clinical Medicine: AUSTIN FLINT, JR., M. D., Professor of Physiology and Physiological Anatomy, and Secretary of the Faculty; ALPHEUS B. CROSBY, M. D., Professor of General, Descriptive and Surgical Anatomy: R. OGDEN DORMEOUS, M. D., Professor of Chemistry and Toxicology. Professors of Special Departments, etc.—HENRY D. NOYES, M. D., Surgeon to the Charity Hospital, etc., Professor of Ophthalmology and Otology: EDWARD L. KEYES, M. D., Surgeon to the Charity Hospital, etc., Professor of Dermatology, and Assistant to the Chair of Principles of Surgery, etc.: EDWARD G. JANEWAY, M. D., Physician to the Bellevue Hospital, etc., Professor of Pathological and Practical Anatomy. (Demonstrator of Anatomy.)

A distinctive feature of the method of instruction in this College is the union of clinical and didactic teaching. All the lectures are given within the Hospital grounds. During the Regular Winter Session, in addition to four didactic lectures on every week-day, except Saturday, two or three hours are daily allotted to clinical instruction. The union of clinical and didactic teaching will also be carried out in the Summer Session, nearly all of the teachers in this Faculty being physicians and surgeons to the Bellevue Hospital and the great Charity Hospital on Blackwell's Island.

The Summer Session will consist chiefly of Recitations from Text-books. This term continues from March 17th to July 1st. During this Session there will be daily recitations in all the departments, held by a corps of examiners appointed by the regular Faculty. Regular clinics will also be held.

FEES FOR THE REGULAR SESSION.

Fees for Tickets to all the Lectures during the Preliminary and Regular Term, including Clinical Lectures	$140.00
Matriculation Fee	5.00
Demonstrator's Ticket (including material for dissection)	10.00
Graduation Fee	30.00

FEES FOR THE SUMMER SESSION.

Matriculation (Ticket good for the following Winter)	5.00
Recitations and Clinics	50.00
Dissecting (Ticket good for the following Winter)	10.00

For the Annual Circular and Catalogue, giving regulations for graduation and other information, address the Secretary of the College, Professor AUSTIN FLINT, JR., Bellevue Hospital Medical College.

THE CHARLESTON

MEDICAL JOURNAL

AND REVIEW.

(NEW SERIES.)

VOL. I.] CHARLESTON, S. C., OCTOBER, 1873. [No. 3.

ART. I.—*Views in regard to the Treatment of Yellow Fever, elicited from Southern Physicians by the "Observations" of* JOSEPH JONES, M. D., *Professor of Chemistry and of Clinical Medicine, in the Medical Department of the University of Louisiana, Visiting Physician to the Charity Hospital, New Orleans, La.*

GLASS BOX 1542, P. O., NEW ORLEANS, LA., July 22d, 1873.

PROF. F. PEYRE PORCHER, M. D., *Professor of Clinical Medicine, Medical College of the State of South Carolina, one of the Editors of the Charleston Medical Journal and Review.*

DEAR SIR: I desire, by the discussion of the TREATMENT OF YELLOW FEVER, to develop and record the views, upon this important subject, of the most learned and distinguished physicians of the South. Your attention, therefore, is respectfully directed to the following "*Observations upon the Treatment of Yellow Fever*," and you are requested to record the results of your varied and extensive experience, which will be presented, with those of others, in the pages of your valuable journal:

Observations upon the Treatment of Yellow Fever, (first published in the American Practitioner, July, 1873,) *by* PROF. JOS. JONES.

I. Yellow fever is a self-limited disease, and cannot be arrested by drugs. The poison of yellow fever, as well as the deleterious

products resulting from the chemical changes which it excites, are eliminated mainly by the skin and kidneys. Black vomit is the *result* of the action of the yellow fever poison upon the blood, and upon certain organs. It should neither be regarded as the active cause, nor be treated as *the disease.* Black vomit must be viewed as a *result*, and not as a *cause*, of diseased action. Therefore, the functions of the skin and kidneys should be promoted by suitable means during the progress of the disease. During the early stages, the physician should employ those measures which are best adapted to equalize the circulation, and promote the regular and free exercise of the functions of the skin and kidneys. Stimulating diuretics should, as a general rule, be avoided, as they tend to increase the irritation and congestion of the kidneys. A favorable impression may be made upon the circulation and upon the skin by the free use of the hot mustard foot-bath, by the vapor-bath, and, in certain cases, by the warm-water bath. The action of the skin and kidneys may be promoted by draughts of lemonade, and of warm decoctions of mild diuretics, as orange-leaf and sage-tea, and water charged with carbonic acid.

2. The diet should be light, but nutritious. Beef-tea, chicken-tea, corn and rice-gruel, and barley-water, are the best forms of nourishment, and should be continued at regular intervals throughout the active stages of the diease. Solid food, and even bread, should be avoided. In many cases, the preceding measures, accompanied by absolute rest in bed, and the careful and continuous attention of an experienced nurse, will be all that is required. Alcoholic stimulants should be used with caution, and their effects noted. They have proved beneficial in certain cases attended with great prostration in the stage of febrile excitement. Champagne, when pure, is, perhaps, one of the best forms of alcoholic stimulants, from the presence of the carbonic acid with which it is charged.

3. Efficient, but gentle, purgation in the *early part* of the *first stage* of active febrile excitement may prove beneficial in relieving, in a measure, the congestion of the kidneys and liver, and in removing fecal matters from the bowels. If mercurials are employed, they should be used in the early part of the first stage, not later than the second day of the disease. For an adult, from eight to twelve grains of calomel or blue mass will be sufficient. Purgatives should not be administered in the second stage of calm.

4. Quinine may prove beneficial in the *earliest stage* of the disease, by its effects upon the nervous system, and by its power of diminishing the temperature and equalizing the circulation; but this drug has no such curative effect in yellow fever, as it has in paroxysmal malarial fever. Yellow fever will run a definite course, and pass through a definite series of changes, whether quinine be administered or withheld. After a careful examina-

tion of the statements of Blair, and others, we have failed to discover any facts or cases by which the power of large doses of quinine to *abort yellow fever* can be fully and unequivocally established. It is very evident, from his own statements, that the action of Blair's favorite compound of calomel and quinine, having the symbol xx. by xxiv. was very uncertain; and questions may be raised as to whether the cases said to have been aborted were yellow fever at all, or whether they may not have been some form of malarial paroxysmal fever, or whether they may not have been the milder forms of yellow fever, which would most probably have progressed regularly to convalescence after the hot stage of febrile excitement. Our own experience, as well as that of many others, has not accorded with the statement that, after yellow fever has been established it *can be aborted.* Of course, it would be entirely unnecessary to argue the question with those whose diagnostic powers are so acute that they are able "to detect a case of yellow fever before the supervention of the hot stage."

The power of quinine not only to arrest, but also to ward off, paroxysmal malarial fever is undoubted; and it has been used extensively, not only in the treatment of yellow fever, but more recently as a prophylactic. Dr. Newkirk, who was at Asuncion during the recent severe epidemic of yellow fever, assured Dr. Wm. Nathaniel Hiron, of Buenos Ayres, that the mortality was small, and that quinine was very generally and extensively used; and he expressed his belief that quinine was prophylactic, and that its continuous use in a healthy person, during an epidemic, caused any disease that showed itself to be mild and tractable.

Dr. Hiron, in his account of the recent severe epidemic of yellow fever, in which Buenos Ayres, with a population not larger than that of New Orleans, lost, according to the most accurate estimates, nearly twenty thousand of her citizens, records the additional fact, illustrating the prophylactic properties of quinine, that "of eleven *practicantes* (dressers) of the Hospital de Hombres, eight took quinine in doses of three grains daily. All of these had fever of a benign form. Three took no quinine; these had the fever very severely, and one died."

While the facts relating to this important subject are too few to warrant any decided conclusion as to the propriety and necessity of using quinine as a prophylactic by those exposed to the yellow-fever atmosphere, at the same time there are facts which indicate that quinine acts not so much as an "antidote" to the poison, but as an "antidote" to the *effects* of the poison, in the system, by preserving the integrity of the blood, regulating and promoting excretion, equalizing the circulation, and fortifying the nervous system against the action of the poison. According to Binz, quinine has the power of arresting putrefaction and fermentation, and is an active poison for all low organisms, ani-

mal and vegetable; and Dr. Grace Calvert has confirmed the observations of Binz, and announced the power of quinine to prevent the development of fungi.

These facts have been applied to the explanation of the effects of quinine upon the process of inflammation. Thus, according to Conheim's views, pus being mainly a collection of white blood-globules which have passed through the walls of the vessels—quinine having the power of arresting the motions of the white corpuscles, hence preventing their exit from the vessels—the alkaloid arrests, or at all events diminishes, the formation of pus during the course of inflammation. The well-established effect of quinine in producing a *decrement of temperature in fever* has been referred to its power of destroying the ozonizing power of certain substances; and as the red corpuscles have this power, quinine in the blood is supposed to diminish the oxidation of tissue, and thus to lessen the production of heat. Thus Ranke and Keener found that the tissue changes were diminished under the action of large doses of quinine. Zuntz has recorded the observation that quinine, in ten-grain doses, lessens the daily excretion of urea by one-third or more; and Unruh has found the same to occur when quinine is administered in fevers. Harley added quinine to blood, and found that it took up less oxygen and gave off less carbonic acid than blood which had not been thus treated. Zuntz and Schute have employed the changes in the alkalinity of the blood for the determination of the same fact. Thus, if fresh blood be drawn, a development of acid begins in it, and continues, at first rapidly, then more slowly, till putrefaction sets in; and as this acidification depends on oxidation, the diminished alkalinity of the blood thereby produced furnishes a test of the rapidity with which oxidation proceeds; and it has been determined by the experiments of Zuntz, Scharænbroich, and Schute, that quinine, bebeerine, cinchonine, and picrate of sodium, lessen, in different degrees, the production of acid, and consequently prevent the oxidation of the blood.

The experiments of Binz are especially important in their bearing upon the question of the direct action of quinine upon the chemical changes of the blood, or of its indirect action through the nervous system, which show that when putrefying liquids are injected into the circulation the temperature of the body rises; but if the fluids be previously mixed with quinine, whereby the putrefactive processes are arrested or destroyed, the rise in temperature is either entirely arrested or considerably diminished. Such experiments not only throw light upon the therapeutic action of such alkaloids as quinine, but they also illustrate, as it were, the very nature of the processes of those diseases, the effects of which they modify or counteract, by the peculiar chain of chemical actions which they induce in the blood.

5. While local blood-letting may be beneficial in the first stage,

when practiced chiefly for the relief of local congestions of the stomach and kidneys, general blood-letting is injurious on account of its depressing effects upon the heart and nervous system. Cut cups should be employed with caution, and in the majority of cases they are unnecessary. The circulation will best be influenced by dry cups, sinapisms, and hot mustard foot-baths. Blood-letting, either in large or small quantities, repeated at intervals, is injurious, because it permanently reduces the pulse, prostrates the powers of life, and quickens the fatal termination.

6. The employment of the mineral acids internally, as the nitro-muriatic, from its supposed beneficial effects upon the jaundice, as well as of the tincture of the sesquichloride of iron, from its supposed power of arresting or preventing black vomit, is of very doubtful propriety. If the view be correct that black vomit is intimately associated with, and even dependent upon, impairment, if not complete suppression of the functions of the kidneys, and if to a certain extent it be an effort of nature to relieve the blood of certain poisonous constituents, such agents can have little or no remedial power, and they are in many cases directly injurious by their irritant action upon the congested, irritated, and softened gastric mucous membrane.

7. While opium and its preparations may, in certain cases attended with sleeplessness and great restlessness in the first stage, produce favorable results, at the same time they possess no power of arresting or curing the disease; and should be used with great caution, as they may act with great energy and even poisonous effects when the function of the kidneys is impaired or arrested. This observation applies equally whether opiates be administered by the mouth or by subcutaneous injection.

8. The maintenance as far as possible of absolute rest in the recumbent posture. This precaution appears to be indicated by the results of experience, as well as by the *lesions of the heart*, which I have shown by careful post-mortem examinations to be characteristic of this disease. The central organ of the circulation is structurally altered and enfeebled in yellow fever. The muscular structures of the heart present alterations similar to those observed in the liver and kidneys. Oil and granular albuminoid or fibroid matter is deposited within and around the muscular fibrillæ, and the organ after death presents a yellow, flabby appearance. In some cases time is required for the restoration of its free and vigorous action, and this result is impossible without absolute and continuous rest in the recumbent posture.

Every case of yellow fever should be regarded as *serious*, however slight the symptoms may appear; and on account of the profound structural alterations of the heart, liver, and kidneys, and the profound alterations of the blood, the closest medical attendance and the most careful nursing is demanded.

9. The maintenance of free ventilation, and at the same time the avoidance, by proper coverings, of sudden changes of temperature.

I have shown by numerous careful analyses of the urine, and by microscopical examinations of the kidneys after death, that in fatal cases the lesions of these organs are profound. The results of these investigations afford an explanation of the fact that sudden changes or depressions of temperature often cause sudden and fatal changes in cases of yellow fever. By sudden depressions of temperature the function of the skin is diminished or arrested, internal congestions promoted and augmented in the enfeebled state of the circulatory and nervous systems which characterize the second stage of calm and depression, and the already crippled kidneys have an additional amount of work thrown upon them, while at the same time they are still further incapacitated for the performance of this work by the increased congestion.

10. The sudden fatal termination of many cases of yellow fever is to be referred chiefly to the sudden arrest of the function of the kidneys. Complete suppression of urine in yellow fever is of more fatal import even than black vomit, which it often accompanies and precedes. In cases of suppression of urine in yellow fever the malpighian corpuscles and tubuli-uriniferi are filled with granular albuminoid matter, oil-globules, and detached epithelial cells. If the cessation of the excretion of urine was due simply to capillary congestion or defective enervation, it might be met by appropriate remedies; but the results of my chemical and microscopical examinations have placed in a clear light the reason of the impotency of all measures heretofore proposed for the relief of this fatal symptom. The tincture of ergot has been said to have restored the excretion of the urine, but this powerful agent has failed in my hands. The careful physician endeavors to promote the regular action of the kidneys, as indicated in section 1, from the very inception of the disease. As long as the kidneys excrete urine freely we may entertain hopes of recovery, even though black vomit and jaundice may have supervened.

As a general rule, suppression of the urinary excretion is speedily followed by restlessness, delirium, and coma, and, in some cases, convulsions. It is folly to expect any good results from sedatives and the various preparations of opium in such cases. Counter-irritants to the surface and the prolonged use of the hot and warm baths alone promise any good.

11. Yellow fever is a self-limited disease, occurring, as a general rule, but once in a life-time. The constitution of the blood, and even the textures of the body, are altered. The most important organs, as the heart, kidneys, and liver, as well as the most important nutritive fluids, are profoundly impressed. These

changes of the blood, heart, kidneys, and liver, and perhaps also of the nervous system, may be compared to the profound changes induced in the blood and organs, and especially in the integument, by the small-pox poison. I have shown by careful analyses that when the kidneys cease acting in yellow fever, urea and carbonate of ammonia and bile accumulate in the blood, brain, liver, and heart. Many of the nervous symptoms characteristic of yellow fever are referable to the retention of the bile and the constituents of the urine in the blood.

If this view be correct, we cannot by *drugs arrest* or *cure* yellow fever any more than we can arrest or cure by drugs small-pox, measles, or scarlet fever. If drugs accomplish the effect of promoting the free and regular action of those emunctories through which the poison and the products of its action are eliminated, and if, further, they tend to preserve the integrity of the blood, and to sustain the action of the circulatory and nervous systems, they will without doubt achieve much good, and perhaps all that we are justified in looking for in the present state of our knowledge.

By judicious treatment, and by proper attention to ventilation, diet, and rest, we place the patient in that condition best adapted to the successful elimination of the poison and the products of its action ; but we do not arrest or cure the disease, as we certainly may do in paroxysmal malarial fevers, by the proper administration of quinine.

CORRESPONDENCE.

CHARLESTON, S. C., August 3d, 1873.

PROF. JOSEPH JONES, M. D., *New Orleans, La.:*

DEAR DOCTOR: * * * * * * I send you my Address before the South Carolina Medical Association, at the meeting held in Columbia, April, 1872, which contains *my views on Yellow Fever.* These are substantially similar to those which I published as far back as 1858–1859, in the January and March numbers of the Charleston Medical Journal and Review.

With thanks for your favors,

Most truly, yours,

F. PEYRE PORCHER, M. D.

The following is an outline of the views of Professor Francis Peyre Porcher,* M. D., on the treatment of Yellow Fever :

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*President's Address before South Carolina Medical Association, meeting held in Columbia, April, 1872. Yellow Fever in Charleston, 1871, with remarks upon its treatment, by Francis Peyre Porcher, M. D., Professor of Clinical Medicine, Medical College of South Carolina, Charleston.—Trans. South Carolina Medical Association, Charleston, S. C., 1872.

Only a few remarks will be made with reference to the vexed and difficult question of pathology. But with regard to treatment, in giving the opinions derived from my own prolonged experience, I will express what I think *de novo*—not with unbecoming positiveness on all points, I hope,—but without regard to the "written law," though it be contained in bulky volumes. Whilst many even now claim great success and a large proportion of recoveries, others tell us that there is no method of treatment which can be relied upon in this disease; that a certain heavy percentage must die, despite all we do; and we must, therefore, without further exercise of mind, try everything—but succumb to inevitable destiny. This "per centage," I feel sure, will often be found to depend, for the most part, not so much upon a failure in the efficacy of the means at our disposal as upon the existence in some cases of certain unavoidably unfavorable conditions; in many others, upon the neglect of ordinary precautions, want of care, useless delay in treatment, and other preventible causes—which, being guarded against, will, I think, render the disease more amenable to measures which *are* efficient for its relief. Let not this dread term "per centage" with its delusive air of precision—like that "horrible shadow" conjured up and existing only in the highly-wrought imagination of the murderer, and, paralyzing his arm and his courage—frighten us also from all future effort to lower it.

Dr. Thomas King Chambers, in his Harveian oration on "Restorative Medicine," attempts to give the several causes, or characteristics, of disease—the categories in which all diseases must necessarily fall. Yellow fever, I am inclined to think, may possibly be embraced under one of these. If, for example, then it be admitted to be owing primarily to a deficiency of vital, or "a partial loss of functional force," (though these terms seem to me vague and unsatisfactory,) caused by organic or other germs—which act, perhaps, in the nature of a ferment, and which excite a fever in the blood like the zymotic poisons—most certainly, the inceptive stages do *not* require the corollary of Mr. Chambers's proposition to be carried out, namely: that "restorative medicines" are to be used for their relief. Being unable, therefore, to wed the corollary to the proposition as a natural sequence, in this instance at least, if I am correct, a defect or want of comprehensiveness exists in the generalization sought to be established by him. It is *not* "by endowing or enriching the body," that cures are effected in this stage at least. No cod liver oil, beef tea, or other nourishment, or even stimulants, are applicable here. Very little building up is required at any period in this disease, till absolute convalescence is reached, and when all danger of gastric irritability is overpassed.

The peculiar malarial, yet material poison, when first in

operation in the system, produces (through nervous paralysis of the capillary arteries perhaps) intense fever and great excitement of the circulation, with torpor of the glandular and secretory apparatus. It shuts up all the secretions and excretions, and with a high fever, which it creates, rapid destructive metamorphosis of the tissues occurs, caused by the intense combustion going on. So that "spoliative," in place of enriching treatment, in the shape of mercurial, saline, or other purgatives, are, on the contrary, imperatively demanded in this incipient stage. These are to be accompanied by revulsives, hot foot-baths, and the application of cold to the upper extremities, in order, severally, to empty the intestinal canal and the torpid glandular organs; to diminish temperature, and to contract capillaries. All these means, also, serve, incidentally, but powerfully, to lessen the tendency to nausea and to irritability of the stomach. The latter does not decidedly lead to, or induce black vomit, as is commonly supposed, though the one often accompanies, or precedes, the other. Both result from the same efficient cause, namely, the *altered condition of the blood* induced by the fever. The peculiar vomit is probably owing to what Warren calls "mortified blood"—blood thinned by the decomposing action of excessive fever, transuding into the stomach, and blackened by its acids. I could discover by the microscope, frequently used, no distinct difference between this and other bloody matters vomited—which have been acted on by the gastric juice—as where blood from a cancer is poured into the stomach and afterwards ejected.

After the initial chill, or chilly sensations of the access, is over, I think that there is what Chambers, in speaking generally of some types of disease, designates as "loss of elasticity in the smaller arteries"—*hence the fever*, as in ordinary inflammations. This the cold applications diminish, at the same time that they reduce the high temperature, which rises, in the onset of cases of great violence, to 105, 107, and perhaps higher. This, of course, if unsubdued, leads infallibly, and of necessity, to subsequent trouble: to destructive tissue changes, to blood poisoning, to black vomit, to coma, and to convulsions. I have seen thorough and persistent spongings with ice-cold water, when combined with the use of the other agencies advised, reduce the temperature, lessen all the bad symptoms, in a surprisingly short time; having the power, seemingly, to change the entire character of the disease, and imparting comparative mildness to its whole subsequent career. I will stand to this truth, for in the perception and practical carrying out of it, lies the chief virtue of the plan which I advocate, and assert to be successful.

In general terms then, our first effort must be directed to the relief of the intestinal and glandular torpor, which always exists,

and which is marked by costiveness; we must diminish the cutaneous and general heat; empty the vessels of the system which are laden with impure blood, and obviate the tendency to renal engorgement, indicated by the frequent presence of albumen. This is effected by the revulsives, aided by a mild alkaline diuretic, to be referred to subsequently; after this is done, we must strive cautiously at "construction," and whilst allowing the recuperative powers full exercise, we are to do nothing to impair the strength remaining, or to weaken the energies of the constitution which have become greatly enfeebled. The unacclimated, who are seized with the fever, are nearly, or quite always, in a quasi critical state—ready at any moment to take the descending path, and to become dangerously ill; hence, they require as careful handling as children do with scarlet fever. Whilst, therefore, nothing is omitted which will tend to diminish the fever, their strength must be carefully husbanded; for the slightest neglect, the failure to keep down the temperature by the application of cold water, or too much medication—though these may seem light transgressions—are powerful, and are weighty in turning the balance against them.

If the disease under consideration should be thought to be more resemblant to Dr. Alison's idea of inflammation, and, therefore, to be owing to "a local increase of a vital property," here, again, mercurial, antiphlogistic purgatives, used at the beginning, serve to diminish the heart's action; to lessen the inflammation by spoliation; by the drain of fluids from the body, augmented by the cooling operation of the salines—which are added to the other means here recommended. All these are measures which are only to be employed at the beginning, using the agents in sufficient amounts to effect our object, which is, to empty the bowels once thoroughly and effectually, without, as I urged, weakening the patient any more than is absolutely required. Purgatives are, on no account, to be persevered in. The failure to discontinue them after the efficient action of those used on the first day is procured, is, I am sure, a grievous error, which is often grievously answered for.

Several authorities of great experience, to whose advice I would refer with great respect, commit the fatal mistake of repeating the mercury and the cathartics, and pushing their use much too far. Even Blair, though in my judgment eminently on the right track, and for this reason very successful, *permitted* his "xx. of calomel and xxiv. of quinine" to be repeated under emergencies, and to be used, again and again, as often as six times. Those who attempted in this city to carry out his precepts to their full limits were forced to abandon them. I prescribe the same formula almost invariably; but never more than once, unless it is not retained, or it does not act.

ASSOCI

Yellow fever has not the duration of typhoid; the causes and the pathology being different. There is usually none of that slow, tedious convalescence; because there is no serious gastro-intestinal lesion; and the intestinal canal and chylopœtic viscera generally are not so much hurt at any one point.

It differs from paludal, malarial fevers, in the marked absence of decided periodicity; and in all its phenomena and its manifestations, it is nearest to the so-called bilious remittent fever of hot countries. But it is much more intense and violent; albumen escapes much oftener from the congested kidneys; and it is *characterized* by the frequent occurrence of black vomit—hence, death, in fatal cases, occurs earlier.

In a fever like this, of one paroxysm (but with a remission somewhere between the twelfth and the thirty-sixth hour, occurring more distinctly when the proper means are used early) which is exceedingly violent at the beginning, if unchecked, it does all the damage it is capable of in a very brief period. Life is virtually compromised, I believe, in the first fifteen hours of its career. In such a fever—where the danger and the terrible sequelæ are owing entirely to the extreme intensity of the eremacausis, and the injury worked in the system by the high combustion which acts principally upon the blood—a certain treatment flows logically. There is no time to be lost in setting about it; and it is only to be regretted that our measures cannot anticipate by several hours the invasion of the attack.

Preferring to be clear, at the risk of being tedious, let me recapitulate in brief the chief points of the treatment insisted upon:

1st. The absolute necessity of early management. 2d. The employment of a large mercurial purge, followed by a saline cathartic—thus emptying the bowels, and disgorging the liver and the glandular apparatus. 3d. Simultaneously, and from the very beginning, using revulsives to the surface of the abdomen; hot stimulating baths to the lower extremities—with the assiduous and protracted applications of ice-cold water to the head, hands, and arms—*as long as they are abnormally hot.* 4th. I introduce clause 4th, as it conveys one of the most important injunctions, with a *nota bene!* to indicate, that all purgatives, all active depressing agents must now be discontinued absolutely, and give place to what is perhaps more efficient than a simple placebo, namely, a mild alkaline diuretic and diaphoretic containing morphia.* The cold sponging (towels or cloths are preferable to sponges for the purpose indicated) and the use of mustard sinapisms and hot mustard pediluvia are to be continued so long as

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*R. Acetate of Potash, drachm i.
Citrate of Potash, drachm i.
Morphia, grs. i.
Camphor Water, ounces vi. M. dessert spoonful every two or three hours, as long as there is heat of skin.

headache, heat of surface, and high thermometric range, indicate the existence or progress of combustion and destructive tissue metamorphosis—*fever*, in other words. Then trust to the recuperative powers of nature, with the aid, if need be, of weak quinine tonics, mild stimulunts, nourishment, etc. * * * *

I have also, with Blair, Fenner, Stone, and others, associated quinine with the mercury used at the inception of attacks. My desire was always to give them combined, (xx. to xxiv. grains of each to adults,) but it frequently happened that circumstances prevented their administration in these quantities. Often, also, the quinine was repeated alone in smaller doses. Without laying great stress upon the essentiality of quinine, or claiming absolutely that the cases would not have recovered so easily without it, it may safely be stated that in the quantities used—in my own person, when suffering from the fever, and in other cases, whether child, or adult (for it was given to all)—it certainly did no harm. My experience of its use in this way, and at this stage, sufficed to show that it could be safely administered in a maximum dose, at the very inception of a fever of great intensity, without any injury whatever to the system; and also that it did not apparently add to the excitement. I think it tended materially to diminish it.

CHARLESTON, July 26th, 1873.

PROF. JOSEPH JONES, M. D., *New Orleans, La.:*

DEAR DOCTOR: I am much obliged to you for sending your "Observations on the Treatment of Yellow Fever."

I am prepared to endorse every word you say upon this subject.

I have tried, and seen tried, Blair's xx. by xxvi., and agree perfectly with you. The self-limiting nature of the disease, makes it absurd, in a pathological acquaintance with our art and science, to speak of causing it to *abort*. The immunity which *one* attack gives, from another, has always made me advocate, privately and publicly, its contagious character—in *one* sense contagious, as are measles, whooping-cough, etc.

All its symptoms, and its course, and the *inefficiency* of quinine in controlling either, has again always separated it entirely, in my mind, from malarial disease.

I shall endeavor, as you do me the honor to make the request, to throw together, however briefly, my opinions upon this subject, which, of course, are entirely at your service. Before I published, years ago, my remarks upon black vomit, in the Charleston Medical and Surgical Journal, the most singular opinions were entertained by the profession generally with respect to its nature. Since then, there seems to be no one, even amongst the uninitiated, who doubts the hemorrhagic nature of black vomit.

I also first called attention to the presence of hemorrhage, within the Graaffian vesicles of the ovaries, which, by some, were taken for corpora lutea.

Yellow fever is a blood disease. If you publish anything on this subject, may I venture to ask you to invite attention to these points?

With high consideration and many thanks,

Your obedient servant,

MIDDLETON MICHEL,

130 Wentworth street, next to Rutledge Avenue.

CHARLESTON, August 2d, 1873.

PROF. JOSEPH JONES, M. D., *New Orleans, La.:*

DEAR SIR: Your letter of the 21st, with pamphlet on the Treatment of Yellow Fever, which you were kind enough to send me, came to hand on the 26th, for which accept my thanks. Your "Observations upon the treatment of Yellow Fever," which I have read with much pleasure, correspond so much with my own ideas of its treatment, that in complying with your request to give you my views of its treatment, I should very nearly repeat your own, especially as regards the uselessness, not to say positive injury, of giving active medicines, or mercury or quinine, to "cut short the disease." I think that many cases have died in consequence of having to contend with the disease and active medicines at the same time, which might have recovered from the effects of the yellow fever poison, without the additional weight of the drugs.

In 1858, we had, in Charleston, a severe epidemic of yellow fever, and in many of the cases, a fine miliary eruption appeared on the chest and neck of the subjects, in the early part of the disease.

I then adopted a treatment, which proved so much more satisfactory than any which I had previously used, that I published an account of it in the Charleston Medical Journal of 1859, March number.

As my views are the same now, I take the liberty of sending you the extracts from the Journal, which you are at liberty to use in any way which you think may best further your object.

Since the epidemic of 1858, I have seen only a few cases where the eruption was distinctly marked, but I have continued to pursue the same treatment with the same satisfactory results.

Very respectfully, yours,

T. L. OGIER, M. D.

The following is an outline of the views of Dr. Ogier, as contained in his article, entitled "Yellow Fever Treated as an Exanthem, where the Eruption has been repelled:"

It has frequently been observed that some cases of yellow fever are attended with an eruption. But as this has been noticed occasionally only, I do not know that the disease has yet been considered an exanthem, or treated as one. Dr. LaRoche, who has published the most thorough and scientific work on yellow fever, says "it is not uncommon to see cases attended with a full crop of miliary pimples;" and Dr. Barton, in his report on the sanitary condition of New Orleans, in 1853, says "that during the epidemic of that year, *a fine miliary eruption* was usually seen on the skin within twenty-four hours of the attack. It was the harbinger of safety *as long as it kept out;* its repulsion, the signal of great danger, if not fatality." This, certainly, is precisely what takes place in exanthematous diseases. It is true, we know of none in which the eruption does not make the most prominent feature of the disease, or at least one of the most prominent, which is not the case in yellow fever.

During the past season (1859) the eruption was very plain in many cases. It covered the sides of the neck, chest and shoulders, particularly of children and women. In every case where this was observed, the gastric symptoms and vomiting were much relieved, and the patient got well without those aggravated symptoms which often portend a fatal termination. This eruption was generally observed about the end of the first, or the beginning of the second day. *From these facts*, I determined, early in the season, to treat the disease not like an ordinary Exanthem, but *like one in which the eruption had suddenly disappeared*, or where, from congestion of the internal organs, or some other cause, the eruption could not show itself upon the skin. With this view, I pursued the following treatment:

Considering it important that the bowels should be evacuated of all irritating matter, I ordered five or six grains of calomel, to be followed, four hours after, by a dose of castor oil; soon after the calomel had been taken, the feet and legs were put into a hot mustard bath, and kept there for ten or fifteen minutes; this bath to be repeated every six hours during the first twenty-four, and continued longer, if the head is much affected. The head is kept cool with moist cloths, and *croton oil liniment* rubbed on the neck, chest, epigastrium, and spine. This is done as soon as the bowels have been evacuated, and is continued every six hours until an eruption appears on those parts. One rubbing will often be sufficient on children and persons of delicate skins. Others require two or three applications before the object is attained. The patient is kept perfectly quiet, and allowed to make no bodily or mental exertion, even so far as to have his attention called to any particular subject. He is allowed to see, if possible, no one but his nurses and physician. He is permitted to sip iced water often, but a dessert-spoonful only at a time. No nourishment is given until the fever ceases, and then strained

gruel only, with boiled milk, from time to time. To determine to the skin, and also to stimulate the kidneys slightly, and moderate violent arterial action, I prescribe the following mixture:

R. Potass Cit.....drachm ij.
Tinct. aconiti rad.....drachm ss.
Sacch alb.....qs.
Aquæ.....ounce vj.—m.

A tablespoonful to be taken every two hours, for eight or ten hours, and then every four hours, until the fever goes off. To children, half the dose is given, or even less, in the same manner.

If the stomach is very irritable, I do not continue the mixture, but apply a blister to the epigastrium, notwithstanding that it may be covered with the croton oil eruption. If the bowels require opening, resort is had to enemata of strained gruel, with a little salt. I never give a purgative, or disturb the stomach with anything irritating, after the dose given in the beginning of the disease. In some cases, where nausea and vomiting have continued until the patient is much exhausted, I give very minute doses of morphine in camphor water, every one or two hours, until relief is obtained. The following is the proportion in which it is administered:

R. Sulp. Morphiæ.....gr. ½.
M. Aquæ Camph.....ounce ij.

Dose a teaspoonful of the mixture.

The success of this treatment has been, in every way, most satisfactory. In eighty-six cases, consisting of:

Strangers (adults) white.....32
Native (children) white.....26
Blacks and colored, strangers.....28

Total.....86

there have been but *two* deaths.

I have never seen so many recover under any other treatment.

It may not be proper to consider the disease, as one of the exanthemata, but I think there is do doubt that irritating the skin, and producing artificially an eruption, where the natural eruption is often found, will always moderate many of the most distressing symptoms, and, in many cases, entirely relieve them. I believe that if we assist nature only by such simple means, the disease will subside more readily than when treated with active medicines. If it be an exanthem, it is clear that active medicines should not be given. What would be thought of violent purgation, or salivation, in small-pox, or measles, or scarlet fever? Some cases would recover, but the majority would die. So it is with yellow fever; some get well under the most active treatment, but many must die.—p. 1–3.

CHARLESTON, S. C., August 4th, 1873.

PROF. JOSEPH JONES, M. D., *New Orleans, La.:*

DEAR SIR: I have, amidst the press of much business, endeavored briefly and hastily to comply with your request, and here send you the rough manuscript, headed *Observations upon the Treatment of Yellow Fever.* I have tried in a great measure to make my remarks take the line of direction indicated in your own "Observations," which you sent me in print. * * * *

I have endeavored to confine myself to main points of treatment, and, of course, have not attempted fully to elaborate any point. * * *

With sentiments of respect and esteem,

I am, yours,

R. A. KINLOCH.

Observations upon the Treatment of Yellow Fever, by R. A. KINLOCH, M. D., *Charleston, S. C., written at the request of* PROF. JOSEPH JONES, M. D., *of New Orleans, Louisiana.*

1. Yellow Fever is not strictly a self-limited disease, in the sense in which we speak of the exanthemata, or even to the extent that typhoid fever is. It is a disease *paroxysmal* in character, though not to be confounded with malarial fever: and in general presents several distinct stages. That is to say, there are groups of symptoms, that present themselves in a somewhat definite order of succession, and which are calculable as to the usual time they will appear in a large proportion of cases that are uninterfered with. Both the character of the paroxysms and the duration of the several stages, vary in individual cases: but, during an epidemic, it is impossible for any one, however experienced and sagacious, to predict with certainty, at the onset of a special case of the disease, what is to be its course or its degree of severity.

There are numerous cases that are entirely uninfluenced by medicines, or any treatment. The grave ones usually run on to the third, congestive or hemorrhagic stage, and terminate, as a rule, fatally, but a few such cases recover, apparently because of the natural powers of the patient.

We know nothing of the origin of the disease, and if there be a poison received into the system, nothing is known how or through what channel this is eliminated in the event of the patient's recovery. Upon this, all is physiological or pathological speculation. Black vomit is most assuredly not the *cause* of the diseased action, but the *result* of certain blood and tissue changes. Its greatest importance, viewed as a symptom, is in a prognostic point

of view. The change in the urinary secretion is likewise a result of anterior conditions, and important, when viewed in the same light.

2. Diet during the first stage, or that of excitement, should be nearly absolute. Ice, or cool water, may be allowed in moderation, or, what is preferable, if the inclination of the patient permits, an abundance of some bland, *warm* diluent drink, as orange leaf tea or barley water. In the latter stages, milk, or milk and lime water, or chicken or beef tea, in small quantities, if the stomach will tolerate these, must be regularly given. Alcoholic drinks are of doubtful use, in any stage, but may be allowed in the latter stage, provided they do not seem to aggravate the stomach trouble. Where these are retained, and seem to comfort the feelings of the patient, they do good. Good brandy, well diluted, and, at times, champagne, are the articles to be preferred. We believe, however, that the cases are exceptional, where these drinks do good.

3. While there are mild cases of this disease that exhibit but one stage and pass off spontaneously, and grave forms, through which the sick only drag to recovery, there are some of intermediate severity, whose results are decided altogether by the character of treatment.

Treatment could be very much simplified, if at the onset the character of the individual case could be defined. But this is impossible. The practitioner will succeed best who considers every case, after the epidemic has opened, as a grave one, and brings to bear all the means that he believes capable of favorably modifying the disease. This is all important at the start; after treatment has to some extent progressed, there are indications which the experienced and sagacious can perceive, and upon which further treatment can be founded.

An active or perturbating treatment *must be confined to the early part of the first stage.* It is most applicable during the first day, and should not be resorted to after the second. An active treatment during this time specified, such as wet or dry cups, or leeches to the head and epigastrium, the use of emeticocathartic agents, is, in all respects preferable to a do nothing, or expectant, or so called "restorative treatment." *It is capable of modifying or abridging the disease.* It is the best means of preventing the changes which furnish us with the third, or hemorrhagic stage. It tends to save the important organs, the brain, heart, liver, kidneys, and stomach.

4. Cupping and leeching may be advantageously used in cases with great excitement, in plethoric persons, where there are severe head symptoms, or much precordial distress.

The cold affusion may often be substituted for local depletion, to relieve the head symptoms. We do not attach great impor-

tance to local blood-letting, and we have rarely practiced general bleeding.

When the stomach is full, or when nausea and epigastric distress is met with at the advent of the disease, a mild emetic of salt and water, warm chamomile tea, or infusion of ipecac, is serviceable. We have no fear of this increasing the irritability of the stomach; on the contrary, after the action of the emetic in these cases, the subsequent medicines are more certainly retained.

Active mercurial purgation, preceded or not by the emesis, constitutes the most important portion of the treatment. Calomel is here the most reliable agent. The dose and its repetition must differ in different cases. Judgment here comes into play; the details of this portion of the treatment cannot be here entered into. We are, however, always careful to give *enough* of the remedy, and we decide upon the amount mainly from the condition of the stools, and the persistence or decline of the excitement. Ten grains is given at first, in case of an ordinary adult of good constitution, and most generally we prefer to give two or three of these doses, at intervals of three or four hours. We deem it safer, as a general rule, to give *three doses*, than to stop short of this quantity. The action of the calomel is usually quickened by a dose of some mild saline, as Epsom or Rochelle salts, or citrate of magnesia, given during the intervals. We have no theory as to the action of these agents, and know nothing as to how the poison is eliminated, but when we observe true mercurial stools, and notice a subsidence of the general excitement, we feel that the patient is comparatively safe. At times, if the excitement returns, or is highly manifested on the second day, another ten grains of calomel may be given. *Purgative or revulsive medication ends here.* During this primary stage, remedies of an adjuvant character, are not omitted. The hot mustard foot bath is frequently used; cold affusion and sponging, at times wet packing, mustard sinapisms to the epigastrium and along the spine, etc. Absolute quiet, proper ventilation, and guarding from changes of temperature, are all essential.

We have no faith in the internal administration of diaphoretics and diuretics. The use of these is founded on a theory of "*elimination*," and they often do harm by disturbing the stomach.

Quinine, in some epidemics, we have seen, in scruple doses, do good, acting as a modifier of the general excitement, lowering the temperature, inducing diaphoresis, and exercising a decided calmative influence. Where there is great excitement and a predominance of head symptoms, we have seen it not only fail to do good, but frequently increase the restlessness and general severity of the symptoms. It does not always control the disease as it does malarial fever. Usually the quinine is given with mercury, and hence, we think, the true reason of the success claimed for it.

When the disease is "*aborted*,"* in the signification of this term, as used by Blair, more good should be attributed to the mercury than to the quinine.

We have every faith in Blair's statement as to the results of his treatment by his xx. by xxiv., and we have verified his experience *during certain epidemics*. He is far too sagacious and intelligent a physician to have confounded yellow fever with bilious remittent, and his description of the disease, as he saw it, corresponds accurately with the disease as we know it here. We cannot agree with those who attempt to explain away his statements upon the supposition of ignorance, or careless observation. Our view of this matter has long been, that, if Blair was in error at all, it was in attaching too much faith to his quinine, and too little to his calomel.

Let us look on this matter in this wise:

1st. Upon the supposition that Blair treated a malarial, or true "paroxysmal fever," for yellow fever, we must proclaim him a *fool*, although he has written a *splendid* book!

2d. If, during an epidemic of yellow fever, he met with cases chiefly of the "milder forms," he must have been extraordinarily fortunate.

3d. If the disease was a severe one, or a blended type of fever, and the success of the quinine treatment was determined simply by its influence upon the malarial element, what *had this to do with the progress or result of the yellow fever element?*

When yellow fever prevails in localities where malarial influence is potently operative the mortality should be enhanced; certainly it should not be lessened, from the superaddition of a disease so serious as bilious remittent fever. While, then, we are rather disposed to look upon quinine as an agent of some value in this disease, we hold it to be altogether secondary to mercury, and believe that we can, in many epidemics, afford to do without it.

OPIUM, *next to calomel, is the most valuable agent we can make use of.* As a rule, it is most useful after active medication has been practiced, and most applicable to the latter stages of the disease. Given in the form of morphia, in small doses, either by the stomach or hypodermically, it controls the restlessness which so generally attends this period of the disease, and is worth every thing else besides, in calming the irritable stomach. In some few cases, where the stomach is early irritable, and in nervous subjects, it is of advantage to add a quarter of a grain of morphine to the first dose of calomel given.

Other Remedies. Our proposed medication is so far founded mainly upon *empirical* knowledge. We pretend to no explana-

* NOTE.—The term "*resolved*" is better, and we believe that remedies are capable of modifying the excitement, and abbreviating the paroxysms. Hence the disease is not strictly self-limiting.

tion of the true *modus operandi* of the agent. There are many other agents suggested, from supposed correct pathological and chemical knowledge, the value of which we hold to be exceedingly problematical. Such are the so called blood-restoratives—the class of astringents—the antiseptics—the germ destroyers—the deoxidizers, etc., etc.

Every epidemic furnishes us with abundant illustration of the tendency of our profession to go astray, and hold to fanciful theories and new remedies, to the neglect of all established empirical facts. Thus has progress in the treatment of yellow fever been arrested, and thus are many of us still at sea, still doubting if there is any available means of coping with the terrible disease.

It is melancholy, but true, that the young practitioner, who would acquire the requisite knowledge for dealing practically with yellow fever, can find it more certainly in the brief and glowing pages of some of the oldest writers on the subject, than in the voluminous theoretical productions of many who claim to represent modern enlightenment in medicine.

We only say of the treatment applicable to the latter stages of the disease, that it must be almost purely hygienic and dietetic. We must simply let the sick man get well; help him by carefully aiding his natural powers; don't offend or cripple his weakened organs with physic; and *don't, as so many are disposed to do, torment him and add to his constitutional depression by cutaneous irritants or vesicants.*

MOBILE, ALABAMA, July 29th, 1873.

PROF. JOSEPH JONES, M. D., *New Orleans, La.:*

MY DEAR DOCTOR: I received your pamphlet and observations on the treatment of yellow fever, several days since. I read it carefully this morning, and I am so much impressed with your statement relative to the structural changes that take place in the heart, liver, and kidneys, that I feel obligated to corroborate your opinions by my own personal observations and experience.

The practice mostly popular here is a combination of Blair's abortive—the xx. calomel and xxiv. quinine, in the commencing stage. The mustard, hot foot-bath, and warm drinks, together with the old Creole habit of giving orange leaf tea, because of its cooling influence upon the stomach, and when warm, actively promoting the action of the skin. This draught is mostly resorted to, to enable the skin to come to the rescue of the kidneys for the elimination of the poison. The urinary secretion furnishes the best testimonial of the real condition of a yellow fever patient, and in calling the attention of the profession to this fact, Blair rendered a great service, which, I regret to say, is not yet fully appreciated.

The late Dr. J. C. Nott was the first, if I am not mistaken, to

manufacture black vomit from the blood, by adding to it an acid in its fresh state, thus showing that there was in it a foreign element.

We know that poisoned blood, whether from pyæmia, malaria, or long attacks of typhoid or typhus fever, the bite of venomous insects or animals, or yellow fever poison, begets a hemorrhagic tendency, and we know that we must depend upon the skin and kidneys mainly to relieve the system of any poison that affects it; hence, no one at all acquainted with the modern notions of disease, could hesitate in declaring the correctness of your observations with reference to the real principles of treatment.

It is surprising how long our physicians have been in duly appreciating the structural changes of important organs in yellow fever. Lewis, I believe it was, who called attention first to the pathological alterations in the liver, Blair to the albumenous urine, and that he hailed with delight the appearance of bile in the urine, and that in case of malignant yellow fever, the bile augmented *pari passu*, with the decrease of albumen, until both finally disappeared, and the skin was relieved of its jaundiced hue; but so far as I am informed, to yourself belongs the credit of calling the attention of the profession to the feeble heart accompanying and following yellow fever attacks. Stokes was the first to point out to us, if my memory serves me correctly, (I write hurriedly, because I have not the time to look up authorities,) that fatty degeneration of the heart was invariably to be found in long attacks of typhus fever. Our profession here, for the most part, have appreciated this fact, for oftentimes it has been the subject of discussion in our medical society. The absolute quiet enjoined upon the patient, that on no account shall he raise his head from the pillow, so as to deprive his heart of the necessary nerve power, was first empirically introduced; but now, by virtue of the advancement of our knowledge of structural changes in organs, revealed by the microscope, and by chemical examinations, we know that the feeble heart and brain is due to fatty degeneration, which, in the majority of instances, is only temporary, but sometimes lingers, and remains, more or less, as a permanent lesion. Now nearly twelve months ago, Dr. Gaines and myself attended a boy about twelve years of age, whose case was one of great interest. His parents, with their family, were spending the summer at Ocean Springs, and this little boy, while playing in the water off the beach, got a splinter in the great toe of one of his feet. His mother, feeling exceedingly anxious and nervous about him, brought him to his family physician, Dr. Gaines. Dr. Gaines being assured that a portion of the foreign substance still remained, made a few incisions, but failed to find anything; this he followed up with poultices. The second day after the incision the little fellow had fever that seemed to be paroxysmal, for which he was treated by Dr. Gaines, by a mercurial purge and quinine.

The incision in the toe became covered with a saponacious deposit, in the meantime, and the whole toe had assumed, at the time I saw him, in consultation with Dr. Gaines, a phlegmonous appearance, precisely resembling a neglected felon of the finger. The probe failed to detect denuded bone. The incision was enlarged, so as to take all tension off that was caused by the increased swelling. Yet the fever, in spite of quinine, and chlorate of potash, and tincture of muriate of iron, which was administered during the interval, still recurred, until the system was so profoundly affected by the poison, that structural changes were inaugurated in the heart doubtless, and the nerve power was so enfeebled, by the same cause, that simply the removing of him from the bed brought on a failure of the heart's action, and collapse that carried him off.

Now, to any mind reasoning from analogy, all these septic poisons are prone to beget fatty degeneration of either the heart, the brain, the liver, or kidneys; indeed all these organs may be affected. This is true, let the poison be either that which generates typhus, typhoid, or yellow fever and diphtheria, not so common in malarial fevers, yet sometimes occurring.

But, in malarial disease, the feeble heart is, doubtless, mainly due to impoverished blood, and therefore its scanty nourishment, and the structural changes are not so rapid and marked as in the other diseases mentioned.

In my early experience, I practiced for a few months in the prairie region of East Mississippi, and after the country was drained, and in a state of high cultivation, malarial diseases became almost a disease of the past, and occasionally there would be an outbreak of typhoid fever on the plantations, and in the early Fall, when the cold nights would check the secretions of the skin, and tax the kidneys additionally, and the kidneys (enfeebled) not being equal to the task of elimination of the poison of the disease, and its morbific products, and the nervous system being also depressed by the change of temperature, the patient would collapse, and die apparently of congestion of some of the internal organs, but really of a feeble heart, and not of internal congestion due to malaria.

This is the manner in which the case of diphtheria died—he collapsed from a feeble heart. The pulse, after the cessation of the fever, gradually grew slower, and of a "*soap bubble*" character. The points of incision remained unhealthy, and took an ulcerative action, the first phalanx being destroyed by it, and the whole surface remaining covered by the diphtheritic deposits; and the fact, that it was diphtheria, was fully established by the outbreak of the disease, in other members of the household, with the characteristic lesion in the throat, of which one of them died.

In the fall of 1870, I had a very severe attack of yellow fever, with a relapse on the thirteenth day, from over eating.

From all the facts, relative to the natural history of the disease, that I could gather, I believed that the poison, in the great majority of instances, had expended itself after the ninth day, and although on the fifth day of my attack, my faucies and pharynx were covered with a diphtheritic deposit, I did not then, nor do I yet, regard it as a complicating attack of diphtheria, having often times seen saponacious deposits on inflamed surfaces, in septic diseases; and appreciating, at the same time, the fact, that I had suffered, during the greater part of my life, from a follicular pharyngitis, I construed the deposit, simply as a local manifestation of a poisoned condition of the blood, of a high type. By the tenth day my tongue was stripped of a heavy brownish fur that covered it; the mucous membrane of the pharynx and throat, as far as visible, was denuded of the epithelium, and doubtless, this desquamation had taken plaee in the interior of the stomach, and possibly had extended throughout the greater portion of the length of the intestinal canal. The whole aspect of the tongue was that peculiar condition, often times seen in typhoid fever, compared to raw beef, so completely stripped of its ephithelium, that the fibres of the muscular structure could be outlined by the eye. This desquamation was completed by the end of the ninth day. With a feeling of safety I took some solid food, on the thirteenth day, and I had scarcely swallowed it before I became dizzy, and this was soon followed by a fainting feeling, and although occupying the recumbent posture, I soon became unconscious, and collapsed, and did not react, until my stomach was emptied by vomiting in the early part of the night, its contents being a large quantity of black vomit and what I had ate in the morning.

After this, reaction came on, and to the skill of my friends, Drs. Gaines and Ketchum, I owe my recovery. My convalescence was slow, yet I appreciated the fact that my heart has not regained its former vigor, notwithstanding my health, otherwise, is better than it was previous to the attack.

Any over exertion, running up and down stairs, mental anxiety, and especially the least imprudence in diet, notifies me of the feebleness of my heart. My muscular system, generally, is fully as good as it was previous to the attack. Now I believe that the disease, produced in my heart's muscular structure fatty degeneration, from which I have not yet entirely recovered. I have seen this feeble heart follow attacks of yellow fever in other instances.

I attended, in his last sickness, the distinguished divine of the Methodist Episcopal Church, the late Rev. Dr. Neely, who died of it (feeble heart). No post mortem examination was allowed, yet all the indications pointed to death from a feeble heart; nearly two years after his attack, in 1867.

This feebleness is appreciated in the treatment, but the cause that gives rise to it, is not generally understood.

Every practitioner, at all acquainted with the most approved method of treatment, understands that the recumbent position, strictly observed, is essential to recovery in the great majority of cases, and that sometimes those suffering from mild attacks lose their lives by simply getting out of bed.

The question naturally arises, why is this so? The failure in the circulation certainly points to the heart. If you observe the condition of the nervous system, rationally, you are forced to to admit that the great nerve centres remain intact. It cannot be in the ganglionic system; for the simple change of position would not so seriously affect this. Then, by exclusion, we must look to the circulatory system. You observe it in the capillary stagnation first, which, if not relieved, is likely to develope albuminous urine, black vomit, and death. The indications are plain and well understood. Arouse the heart to increased action, by both internal and external stimulation.

Every indication in the treatment of yellow fever, as we commonly see it, points you to the heart and its feebleness, after the paroxysm of fever, has subsided; and this, even in the absence of post mortem examination, would cause us to suspect structural transformation into a tissue of a lower type than healthy muscle, which, of course, would be fat. This feebleness of the heart is probably more rapidly developed in yellow fever than in any other disease; but, doubtless, to a greater or less degree, in all diseases that affect the nutritive function, and especially in those, in which blood poisoning is the precursor and the producer of the lesions found.

Louis ransacked the liver for pathological lesions. Blair called attention to the urinary organs; but empirically, by virtue of the indications of treatment, viz: to support a feeble heart, as the organ primarily involved after the disease is developed by the creation of the poisoned blood, was I directed to the heart.

Then comes the renal lesion; it is nothing but a congestion, causing albuminous urine, and suppression, which may end in structural disease, as we see congestive nephritis of pregnancy may become organic.

Then the liver sometimes undergoes fatty degeneration. The capillary congestion of the stomach, the mucous membrane of which is stripped of its epithelium, and the blood unfit for replenishing tissue, oozes through the capillaries, and terminates life by black vomit.

As already indicated, there is a marked analogy in all diseases from blood poison, whether typhus, or typhoid fever, diphtheria, pyæmia, the bites of venomous reptiles, or insects, the exanthemata, and also malarial fevers. And this resemblance is strik-

ingly marked, in the changes that take place, both in the fluids and solids.

Reference has already been made to the hæmagastric influence of these poisons, but in the solids, many might be credulous about the rapid degeneration of tissue essential to produce the feeble heart, so familiar to every practitioner at all acquainted with yellow fever; yet, when we reflect, how rapidly bodies decompose, after death, especially those dead of malignant blood poison, and when we recollect that fatty degeneration is the first step in post-mortem decay, we can understand, how a fever existing thirty-six, or seventy-two hours, creating a virulent poison, might determine an influence which would inaugurate structural change to a limited extent, even poisonous to death; and in this way alone can we rationally explain the rapid decomposition after death, that we find in persons dying of malignant poisons.

I fear I have wearied your patience, and will not impose upon you the task of reading more upon this interesting subject so prolific of thought and remark.

Yours, truly,

J. F. GILMORE, M. D.,
Professor Surgery, Alabama Medical College.

NEW ORLEANS, July 19th, 1873.

PROF. JOSEPH JONES, M. D.,
University of Louisiana, New Orleans:

DEAR SIR: I am in receipt of your polite note, of this date, asking my views as to the treatment of yellow fever, and cheerfully reply, though the want of time forbids my doing so, as fully as I would desire.

1st. Yellow fever being, in my opinion, as strictly zymotic and self-limited a disease, as scarlet fever, measles, etc, I believe it the highest wisdom not to attack it at all.

I do not believe it to be *curable.*

I have seen, and expect to see again, many cases, passing safely through the attack, without a dose of medicine.

2. As a rule, if I see the case early, I give a gentle purgative.

If my patient had eaten a hearty meal, just before the attack, as not unfrequently happens, I would give an emetic.

These measures are simply with a view of preparing the patient to pass safely through the attack.

3d. The points to be achieved are, absolute physical rest, universal quietude, and the maintenance of the functions of the skin and kidneys. Necessary to this end are, cleanliness, good nursing, pleasant drinks, and good ventilation.

4th. The *complications* of yellow fever call for the greatest activity of the physician, and those must be met, as in other

zymotic diseases—always remembering that the poison of yellow fever strikes gravely at the nerve centres, and that depressing, or highly prostrating, medicines must be avoided.

General blood-letting—never.

Local blood-letting may be resorted to, to relieve local congestions, with advantage in some patients.

5th. *Quinine* is not curative; though, if given early in the attack, with judgment, it calms some cases, induces the heart to action, and indirectly regulates or maintains the functions of the emunctories. Only large doses have this effect. But quinine is wholly inadmissible in many cases, and the only way I can explain this, is to say, there are cases which, from the beginning, are too profoundly impressed by the poison to prevent the use of even as favorable a sedative as quinine in large doses. The instinct of the physician marks out such cases.

6th. *Opiates.* Generally not applicable, save in the early stage, and then in combination with quinine.

Late in the disease, and when restlessness supervenes, they should be given cautiously, as they are apt to paralyze the nervous centres.

I have lately found *chloral* valuable, in a few restless cases, and shall try it more freely.

Most respectfully,

Your obedient servant,

D. WARREN BRICKELL, M. D.

ART. II.—*A Case of Femoro-Popliteal Aneurism successfully treated by the Antiseptic Ligature.* By R. A. KINLOCH, M. D., Professor of Surgery in the Medical College of the State of South Carolina, at Charleston, S. C. [From Transactions of State Medical Association.]

During the month of January, 1873, I had, through the kindness of my friend, Dr. Joseph Yates, of this city, frequent opportunities of seeing Duncan Major, a negro, aged fifty-one, a native of Carolina, and a stone mason by trade, suffering from Femoro-Popliteal Aneurism of the right limb. He came under Dr. Yates's care, as a dispensary patient, during the latter part of December, 1872. The disease was then unmistakable; tumor larger than an egg; had begun to develope, according to patient's account, about two months previous. No cause of origin could be assigned, and the only violence ever known to have been sustained was a strain of the back while lifting a heavy stone two years before.

Considering the race and general surroundings of patient, I regarded the treatment by ligation as offering the best chance of success. At the solicitation of patient however, Dr. Yates, having procured the assistance of a relay of students, willingly undertook the treatment by compression. At the expiration of a month, and after repeated trial of both instrumental and digital compression, no curative result was obtained. In the opinion of the attending physician, however, partial consolidation of the tumor, with apparent development of a collateral circulation, had at one time promised success.

On the 30th of January I was invited to examine patient with the view of deciding upon further surgical procedure. Found his general condition not materially affected, except that a rather frequent and jerking pulse indicated constitutional irritation not present at my last examination. The whole limb, from the groin to the ankle, presented a subacute œdema, which more largely interested the middle and lower portions of the thigh. The aneurismal tumor was now, as far as could be determined with the associated œdema, as large as two fists, and at first sight, induced the belief that the disease had become secondarily diffusive, from rupture of the sack. The tumor occupied the space from about the middle of the anterior and internal portion of the thigh, nearly to the upper border of the internal condyle of the femur, dipping towards the popliteal space, yet separable from this. In other words, it interested most clearly the portion of the artery occupying Hunter's canal. Of a fusiform shape, the diameter of tumor was greatest at the canal mentioned, and the tendency to point was towards the inner and lower portion of the thigh, under the border of the adductor tendon. Elasticity, pulsation, purring, and distinct *bruit* were all very appreciable. Rude handling or pressure gave pain, and patient complained of a feeling of heat, throbbing and slight burning about the seat of greatest swelling. The femoral artery, traceable by the finger from the groin to the middle third of the thigh, felt larger and harder than normal; its impulse was strong up to the point where it dipped under the muscles, just before reaching the upper portion of tumor. A few of the lymphatic glands of the groin were enlarged. The temperature of the limb to the hand was normal.

I advised that all constricting bandages should be removed, all attempts at treatment by pressure abandoned, and the artery ligated the next day.

January 31st, 11 A. M., I operated, at the request of the attending physician. The femoral was exposed in the usual way, a little below the apex of Scarpa's triangle, and a carbolized-catgut ligature, (prepared by soaking the catgut for a week in a mixture of one part of pure acid to seven of olive oil,) placed in position. The wound was carefully sponged with a solution of carbolic acid, (two grains to the ounce of water,) and the liga-

ture then fixed by means of the double turn, known as the surgeon's knot, before making the second tie, to form the knot proper. Only moderate traction upon the ligature was practiced, and with no idea of dividing the coats of the vessel; both ends of the catgut were cut off close to the knot. The wound, after more careful sponging, and the arrest of oozing, was closed by four silver-wire sutures passed through the integument and fascia. A compress of clean dry cotton, retained by strips of isinglass plaster, completed the dressing. The limb was next enveloped in a double layer of cotton batting secured by a roller bandage, and placed in easy flexion upon a pillow. Patient ordered a quarter of a grain of sulphate of morphine, and allowed a milk and bread diet. Immediately after the application of the ligature, the temperature of the limb was, to the touch, decidedly higher than that of its fellow. It is to be regretted that no thermometer was at hand to test the fact.*

5 P. M. Patient in all respects comfortable. Temperature of limb slightly below normal. Ordered the dose of morphine to be repeated at bed time.

February 1st, 10 A. M. Had rested well during night, and now suffers none. Temperature of limb normal.

February 7th, 10 A. M. Since last date nothing unusual had occurred. Recovery had progressed steadily. Inspected the wound, after removing the cotton compress and plasters. Union by first intention was evident. Removed one of the wire sutures, which had cut a little. Supported wound with fresh strips of isinglass plaster. Ordinary diet prescribed.

February 13th, 12 M. Removed remaining sutures. Union complete; cicature firm and contracted; a drop of pus appeared at two of the openings previously occupied by the wires. Surface carefully sponged, and two strips of plaster applied; no other dressing. Patient allowed to sit up, but quiet of limb enjoined.

February 21st, 12 M. Plasters removed. Whole limb of natural size. Tumor reduced to a mere flattened ovoidal mass of less size than an egg. Pulsation of femoral traceable from the groin to the point of ligation. General health of patient perfect. Allowed him the privilege of his room.

Remarks.—At the late meeting of the State Medical Association, in this city, in April last, the subject of the above report was exhibited, perfectly cured of his disease. In compliance with a resolution of the Association, the above brief account of the case has been drawn up for publication. As the views and

*The immediate rise of temperature after ligation of the main vessel of a limb, is one of those interesting phenomena, perhaps, not yet entirely explicable, but possibly due, as suggested by eminent physiologists, to the change in the capillary circulation effected by paralysis of the vaso-motor nerves distributed to the coats of the vessels; or is brought about in part by the sudden removal of the *vis a tergo*, as the current of blood is arrested in its passage through the main channel of supply.

practice of Mr. Lister, of Edinburgh, in regard to the antiseptic ligature are under trial, it is eminently proper that every case that may aid in making up a statistical record of this subject should be given to the profession. We are aware of no reports of operations of this kind in our country, and certainly none can furnish a happier vindication of the success of the animal ligature. (We will not say the *carbolized ligature*, because there is still a question in our mind how far the antiseptic agent determines the favorable result in these operative procedures; which question we cannot now discuss.)

The selection of the method, in this instance, was determined from a desire to test the views of Mr. Lister, and because there was reason to apprehend an unhealthy condition of the vessel above the seat of the aneurism.

Notwithstanding the brilliant results that have emanated from Hunter's clear principles and well established practice, every practical surgeon is aware how near we ever are, after even the most perfect Hunterian operation, to the great danger of secondary hemorrhage. To fix a principle which will enable us to escape this, would be to add, as has been suggested by a clever modern surgeon,* "the crowning glory on the treatment of aneurism, for which it has waited since the time of Hunter."

It is claimed for the carbolized ligature that it can effectually close a vessel without dividing its coats, and without the induction of suppuration. The matter of the non-division of the vessel's coats is a difficult one to prove by operations on the human subject. Experimental procedures, with animals, can best substantiate or refute the claim advanced. But, practically, and for the present, it is most important for us to know that the vessel can be closed without suppurative action. This is well illustrated in the present case, and in others reported by British surgeons. With this mode of treating aneurism, if it can be generalized, we shall have all the advantages of the ligature with immunity from its dangers. We have a cure resulting really from a kind of *immediate pressure*, that could be instituted as effectually in no other way, without risk of the more serious results of the inflammatory process. The animal ligature so nicely compresses the arterial walls as to occasion an immediate arrest of the blood current that goes to the aneurism.

In late years, the treatment by pressure has been conducted mainly upon the principle of a partial arrest of the arterial supply to the aneurismal sack. Such operations have been crowned with much success, and it is true that the principles upon which they have been practiced, may be considered correct so far as they pertain to numerous cases of aneurismal disease. Without

* Mr. Oliver Pemberton, in his Address on Surgery, before the British Medical Association.

desiring here to advert in detail to so interesting a topic, we may remark that the practice of aiming only for the partial arrest of the blood current by the operation of pressure was developed as a consequence of the imperfection of the various mechanical contrivances at first used for arresting the flow through the continuity of the vessel. From the very failure of surgical efforts a new principle or rule became established. Cures resulted in some cases, notwithstanding that the instruments failed to accomplish the work assigned them. And such is the character of the human mind, that at once there followed a somewhat hasty generalization. Under this ruling, aneurismal disease, that could have been cured in a few days, has been only brought to an end after weeks and months of delay and torture—cured *selon les règles*, and therefore in ample time!

A revolution, or a material modification, of views is now pending. The periodicals of the day give us increasing evidence of experimental departure from the principles just alluded to, and examples of successful results of treatment instituted with the view to *immediate* arrest of the blood current and the speedy coagulation of the contents of large aneurismal sacks. The improvements in mechanical means, and the use of anæsthetic agents, which enable the sufferers to endure continuous and effective pressure, until the necessary blood changes in the aneurismal sack are accomplished, have done much to induce a reinvestigation of old doctrines. The necessity will every day become more urgent for considering, in their *individuality*, the cases of aneurismal disease that come up for treatment, before determining the manner of instituting compression, or deciding if pressure is to be preferred to the ligature.

We anxiously await the decision of the profession as to the value of the antiseptic ligature. If the late Mr. Syme, in the confidence of his great operative skill, could believe, in regard to the use of the ordinary silk ligature in the treatment of popliteal aneurism, that success was simply a question of the necessary skill in performing the operation, should not Mr. Lister, who has succeeded him in the good and renowned city of Edingburg, have reason for yet greater confidence in the results of a method which, if he be correct, releases at least from one admitted danger, viz: suppurative action. Establish the truth of Mr. Lister's views, and we have opened a wide field for surgical progress. Already there is sufficient evidence in favor of the new doctrine to stimulate surgical enterprise and experiment. The younger surgeons of Great Britain, at least, are alive and moving. The old rules of the Hunterian time are being reviewed. The necessity for restricting the ligation to points removed from the tumor and from large collateral vessels is again open. The operation of Anel may yet, even in England, vie with that of

Hunter. The distal operations of Brardor and Wardrop promise to become more popular; and the diseases of those great vessels, the Subclavian, Innominate, Iliac and Aorta may come to be regarded as within the reach of our art.

ART. III.—*Epidemic Cerebro-Spinal Meningitis.—Remarks submitted by* J. BEATTY JENNINGS, M. D., *to "Pee Dee Medical Association," November 8th,* 1864, *and ordered to be published.*

We propose to-day to offer you some disjointed remarks upon a peculiar epidemic which prevailed in a portion of Marlboro' District, South Carolina, in the months of December, 1863, and January, 1864, with the hope that we may be instrumental, at least, in *forewarning* the members of our medical fraternity against a surprise, such as we own ourselves to have experienced, if we may not be able to *forearm* them with any additional or new means with which successfully to combat the monster disease when it may again suddenly confront any of us.

I feel it to be due to myself, in the outset, to offer some apologetic remarks for the very crude and unsatisfactory report which I shall be obliged to give of this very interesting epidemic. The past Winter and Spring have been, for the most part, very damp and cold; and, in our immediate vicinity, it has been an unusually sickly season. We have had pneumonias and rheumatisms prevailing to an uncommon extent; these, and all our diseases have, for the time, assumed a *low, subacute or typhoid type.* The practice of our individual firm has been extensive and laborious, and so it happened that at the time of the supervention of this particular epidemic, our time was so wholly engrossed with this general practice as to make it often necessary for myself and partner irregularly to alternate our visits and to preclude the possibility of devoting more time, as we wished to do, to noting more particularly the symptoms, progress, termination and necroscopic condition of these cases. No one can lament, more than we do, our entire inability, for want of time, to attempt any post mortem examination of either one of the six cases, which, constituting almost a moiety of the cases treated by us, proved fatal. Had this investigation been possible, we might have hoped, *not* certainly to shed any new light upon the special pathological characteristics which have been detected with, we believe, *entire unanimity,* by sundry distinguished pathologists in similar epidemics elsewhere, but have satisfied our own minds beyond question of the perfect identity of the character of these several epidemics; and we might have enquired as to the source and patho-

logical significance of certain grave symptoms, which, as far as we have been able to discern, in the limited readings to which we have been restricted, have been *peculiar* to our epidemic, and which may well be supposed to have stamped it with an increased degree of virulency.

This epidemic made its appearance in the Northeastern section of Marlboro' District, S. C., in the neighborhood known as Adamsville, a high, dry, and usually very healthy vicinity; a country pretty thickly inhabited, by a sturdy, generally intelligent and well-to-do class of planters and farmers, and among a people *proverbial* in our district for their generous and substantial good-living, and for their uniformly kind and very humane attention to the comforts and physical wants of their domestics, whether men or animals. It was here, and under circumstances precluding the supposition of any peculiar local causes, that this fell disease appeared about the 14th of December, 1863, simultaneously affecting some six or more individuals, *in as many as five different families*, and at distances respectively removed from one and a half to two and a half miles from each other. These cases, with others, then more or less developed, and still others, which soon thereafter appeared, (numbering in all some seven cases, in Marlboro',) might all have been enclosed within the area of a parallelogram, measured by lines respectively of one and seven miles, and extending in a Northeast and Southwest direction. I shall not hesitate here to acknowledge, and it may not seem strange in the sequel, that I felt myself, on the morning when I first encountered this disease, to be standing almost, if not altogether, powerless, in the presence of some new and giant messenger of death, commissioned, it might be, like the plague or cholera, suddenly to sweep away an untold number of victims from the broad surface of our land. I did not, at that moment, remember ever to have read of any like epidemic, and up to the present time I have seen an account of none which corresponds *in every important particular* of description to this. The wise man has said, however, "there is nothing new under the sun," and applying this apothegm to the domain of medicine, we may at once, and wisely, admit that those more familiar with, or enjoying a more ready access to its teachings, may find no difficulty in re-producing, from the archives of the past, an exact ante-type of all that we shall attempt to describe in this paper. Search but sparingly, as we have done, the records of medicine, and you will find the history of some several similar, if not identical, epidemics which prevailed in France, in different localities, and in Ireland, Germany, Italy, Africa, etc., etc., during the years 1836 and 1847, inclusive, since which time we have found no record of its prevalence in Europe. Dr. Wood, in his Practice of Medicine, 1855, says "a similar epidemic has prevailed of late years in limited districts in some of the Southwest-

ern and in the New England States." Some notice has been taken of these several last epidemics in the Medical Journals of our country, but we have not been fortunate enough to lay hold upon them. In our own State, and so far as we know, in some of the Atlantic States South of New York, if this disease has been observed at all, no published record of it has been given to the profession. It is certainly, and very fortunately, a very rare visitant, as our standard authorities upon the practice of medicine notice it, many of them *not at all*, and the rest but cursorily, and *all* of these, without intimating any personal or professional familiarity with it. All the writers who have noticed it agree, however, in giving us a very terse and correct history, in the main, of the symptoms, etc., characterizing our epidemic under the name of "Epidemic Cerebro-Spinal Meningitis."

As noticed by us, our epidemic presented the following general symptoms: Associated always with the development of a more or less distinct, and low form of fever, the *earliest and most uniform symptom was pain in the occipital region and back of the neck, generally with*, but sometimes without, an early manifestation of tenderness upon pressure over the cervical vertebræ. This pain and tenderness extended, sooner or later, in almost every case, downwards, and in some cases throughout the entire track of the spine. The pain of the head was distinctly described, in a few cases only, as being *boring or lancinating*, and as shooting rapidly from the back of the head through the base of the brain, and into the temples and eyes. Accompanying this pain and tenderness, there was, *in every case*, a stiffness and retraction of the neck, but in varied degree, making it more or less impossible for the patient, at any time, to incline his chin towards his breast; and a persistent effort to do this, however gently, would often at once result in a spasmodic action of the posterior muscle of the neck, drawing the head convulsively backwards, often fixing and wedging it, as it were, permanently back, and almost upon the vertebral column, rendering all motion, consistent with the integrity of the parts, *backwards or forwards*, wholly impossible. This retraction of the head and neck, amounting in several instances to extreme opisthotonos of the entire trunk, was maintained, more or less rigidly, in some cases for days together. It was the *last symptom to yield* in cases that recovered, and then it very gradually run away, and it persisted in at least one fatal case, even after death. The lateral motions of the head could *generally* be made, but these, too, were sometimes accomplished with difficulty, or anon, for a time were even wholly impracticable. Spasmodic twitchings and *clonic* contractions of *certain sets of muscles* were present at times in most of our cases, affecting, in very irregular succession, at one moment an arm or fore-arm, or a leg or a thigh, or some part of the trunk. At another time these spasms would be of a *tonic* kind, and the part involved would

then be rigidly fixed for hours together. An extreme restlessness and general uneasiness seemed to mark the second stage of the disease in some cases, and it proved to be generally an evil omen. It was twice followed, in the cases of children, by general convulsions, and this, again, in one case, by Hemiplegia. It was in other cases the forerunner of general collapse or profound coma. Co-existent with the symptoms above described, there was a more or less general soreness to the touch, the patients being extremely sensitive to pain from pressure. The cerebral functions were mostly but little deranged, and our patients, when fully aroused, would reply intelligently to questions; but they were often in a very listless or dull and drowsy condition, (and that irrespective of the influence of drugs,) and when so, they were often talking incoherently, or muttering unintelligibly. Strabismus, extreme, together with a marked obliquity of vision, was observed in three or four of our cases, and it continued for days together; but so far as we could discover, in no case did the pupils of the eye exhibit any noted abnormal peculiarity. (We may state parenthetically, and as making up a part of the history of *this* epidemic, that of *four* cases which were treated by a skillful physician of North Carolina, in the neighborhood adjoining us, *one* died, and the remaining *three* were left perfectly, and thus far, permanently blind, by an attack of this disease.) A very peculiar condition of the skin was observed in quite a number of the cases treated by us. It was a distinct feature in *all* of our fatal cases, being most prominent in those that soonest succumbed to the disease, and then it was sometimes discoverable from almost the very commencement of the patient's illness. It was less marked in the next most serious class of cases, and in the third, and still more manageable class, it was possible to detect only an occasional vesicle or no manifestation whatever of skin disease. It consisted of a singular admixture of vibices and vesicles, the first giving to the skin an aspect very like to that which is seen in cases of purpura hæmorrhagica. These ecchymosed spots and blotches were of various size and shape, and scattered over the general surface, but were located most plentifully upon the body and upon the extremities. These vibices were interspersed here and there with isolated *vesicles*, which were filled with a pellucid or light straw colored serum, and were of the size of a pigeon's egg, or larger. A few only of these vesicles were seen upon the arms and body; they were most abundant upon the lower extremities; upon the legs and upon the dorsum of the feet. The toes, in one case, were each as completely vesicated, and that within eighteen or twenty hours of the time when the patient felt his first and very slight symptoms of illness, as if they had been each subjected to the action of blistering plaster. A tinged puffiness of the skin of the face, forehead and head, was noticed as an early concomitant of the other symptoms. The

tongue, in all the milder cases, exhibited no very marked appearance; it was here generally pale, and covered with only a thin white fur; but in most of the severer cases, it presented from the first a very full, flabby, and macerated appearance, and was covered soon with an unusually thick, long, moist and dirtyish white fur. The breath, also, and especially in the cases of negro patients, was very peculiarly offensive; its nauseating effluvia was such as we have no where before met with, and cannot describe. The mouth, in two or three of these cases, was filled, "gummed-up," with a thick and tenacious mucus, which was very troublesome to dislodge. Of the digestive organs, the most frequent disturbance was vomiting. This was present in several of our cases in the earlier hours of their sickness. Occurring then, or when vomiting came on in any of the milder cases, the matters ejected were composed simply, so far as we could observe, of the ordinary contents of the stomach; but in the severer cases, these having been first thrown up, the matter next dislodged consisted of glary mucus, portions of which were more or less commingled with a *dark* or *black* flocculent substance, and the proportion of this very rapidly increased, so that at the very next vomiting perhaps the whole would "*look* (to use the very expressive language of the negro nurses who first described it before we saw it) *like soot and water.*" Happily, in our country life, we have never seen the black vomit of yellow fever; but from the description given of it in the books, this apparently was identically the same. The bowels were notably constipated in none of our cases, but required sometimes to be artificially moved. In some of our rapidly fatal cases, a diarrhœal condition was present in the earlier stages of the disease; it supervened in several other cases, at a later stage, and, in either case, the dejections were singular, consisting of a thin, black matter, of the consistence of thick gruel, and resembling very much in appearance the fine black surface mud of our swamps, and being disgustingly offensive. The thirst was urgent from the first, in nearly every case, and so continued till the patient was fairly convalescent.

The pulse in these cases was exceedingly variable, beating from 80 or 90 to 120 or 130 per minute, indicating, in the same case, and often at intervals of a few minutes only, all these several numbers. Its volume and strength were always below the healthy standard. In the worst and quickly fatal cases a state of collapse very speedily set in, in which it was impossible to detect pulsation in any of the arteries, or even at the heart itself. The pulse, in one case only, and that a fatal one, was slow, not exceeding sixty per minute, and was of full volume, but *very* soft and compressible up to the period when profound coma came on, and then became and remained as slow as forty-six. The function of respiration, it may be proper to say, was but little, if at all, notably affected in any of these cases.

The better to illustrate the course of this disease, we will relate as succinctly as possible the history of the following cases: On Monday, the 14th of December, 1863, three patients were visited by my partner (my brother), in three different families, distant each about one and a half miles from each other. Their cases presented on that day these common symptoms—slight fever, with pains in the back of head and neck. Two of them had colds and coughs, and altogether their condition and symptoms were such as led him to anticipate the development of typhoid pneumonia, that disease being very prevalent then in the bounds of our practice.

Tuesday, 15th. These cases were again seen by him, and were found to be very much in the same condition as on yesterday. It was, however, discovered by him, rather accidentally in the first instance, that, along with the pain in the back of the head and neck, there was a stiffness of the latter, so that the patient could not incline his head forwards, and it gave him pain to attempt it. The same disability, with a distinct retraction of the head, existed in the second case, and the pain produced by an effort to carry the chin towards the chest was described to be "like the jagging of many needles" into the back of the neck. This patient complained, too, of general soreness and sensitiveness to the touch. In the third case, the patient (Stephen) was sitting up, feeling himself to be very much better; he still felt some pain in the back of his head and neck, but in such slight degree that the patient himself was surprised to find that he *could not*, when he was now told to, bend his head upon his chest; being a stout and resolute fellow, he made a second and more persistent effort, when he *cried out* from the severity of the pain occasioned by it, and was unwilling to repeat the experiment. Two other cases manifested themselves to-day. Here, then, were no less than five patients seen to-day by my partner, all complaining alike of these strange symptoms. The coincidence was strikingly singular, and could not be satisfactorily accounted for; but as none of these patients seemed as yet to be seriously ill, he was rather perplexingly surprised than alarmed.

Wednesday, December 16th. At three o'clock, A. M. the writer was called, in the absence of his partner, to see and acquaint himself, *for the first time*, with any of these cases. He was summoned now, in haste, to see a little boy, eight years of age, son of Mr. B., one of our best and most substantial citizens, who, as late as fourteen hours ago, was apparently in perfect health, and who, up to that hour, was busying himself efficaciously and playfully, as children in the country generally do, about the work of slaughtering hogs; who, thus in the midst of his fun and frolic, complained suddenly of *pain in the back of the head and neck.* Some two hours later he was known to have a slight fever, and was given a mercurial cathartic; I found him *now* tossing himself

restlessly upon his bed, turning round and around, mostly upon his hands and his knees, and moaning so incessantly and fretfully that it was difficult to still him and get a reply to any question. He did, however, say fretfully that he had pain in his head and neck. He was extremely thirsty, and calling *constantly* for water. His head was thrown backwards towards the spine, and *fixed* in that position. His bowels had been moved two or three times copiously through the night; stools thin and black; supposed them to be the effect of the mercurial purgative which had been given in the afternoon. He had *vomited* two or three times copiously the meanwhile, and just now he threw up a thick glary mucus, intermixed, much of it, with a dark flocculent matter, resembling coffee grounds. His extremities, and in fact his entire surface, were quite cold. I could find absolutely no pulsation at his wrist, nor in any of the larger arteries. I could not assure myself that I could feel even the pulsations of his heart. In this search after a pulse, I was surprised to find a number of dark isolated specks and blotches upon his body and upon his extremities; some as round and as black as a fully ripe whortleberry, and others as large, irregular and livid as if they had been made by a blow from a heavy ferule. An alarming state of collapse, in a few words, had set in; stimulants were called for and freely administered, internally and externally; with subjacent frictions, sinapisms and blisters, to the nape of the neck and spine; but all to no purpose. He continued to be very restless, and to grow more and more weak; about noon, for the first time, a pulse, small and steady, and very frequent, was felt at his wrist. He was seized about the same time with feeble general convulsions; these were soon followed by hæmiplegia of the left side. His right arm and leg continued to be moved incessantly for an hour or two longer; he then became entirely still, and lay in an insensible condition for an hour or two more, and died about 4 P. M., after an illness of twenty-eight hours.

Case II. Bob, a servant of Mr. B., twenty-one years old, was seen by me for the first time, about six o'clock of the same morning. Up to twelve o'clock M., on yesterday, just eighteen hours since, he had been apparently in perfect health and spirits; up to that time he had been actively and cheerfully engaged in the work of slaughtering hogs. He then complained a little of *pain in the back of the head and neck.* He was seen some two hours thereafter, and examined with much care by my brother. He then had some stiffness of the neck with the above named pains and some slight symptoms of fever; no medication was then deemed necessary beyond some local applications to the nape of the neck. I found him now, at my first visit, seated totteringly upon a chair, and evidently very weak, with the stupid look and vacant gaze of a perfect idiot; he replied to my question, and said he "had pain in his head and neck." His head

was slightly retracted, and his neck stiffened. He could not bend his head forwards, and an effort voluntarily made to bend it in that direction brought on first an oscillatory motion of the head, and then, almost simultaneously, spasmodic contractions of the posterior muscles, violently *pulling, jerking and fixing* the head, more or less permanently backwards. The lateral motions of the head at this stage of the case were but little, if at all, impaired; but at a later period, they too, for a time, were wholly impracticable. He had an extremely vacant look, but no abnormal appearance of the pupils of his eyes could be detected. His attendants reported him to have been "perfectly crazy all night," but beyond an almost profound listlessness, which made him very unobservant and inattentive to questions, I could discover no sensorial disturbance. He had had several *involuntary* loose and *very dark* stools during the night, and he was now passing *unconsciously* both his feces and his urine in his clothing. Too feeble to rise up, he was helped to his pallet at his feet, and I turned to examine his pulse. After a most careful search, again and again, I could detect no pulsation within of his arteries or heart. His extremities were quite cold, and his general surface quite cool. He was a very black negro, and I could not tell whether certain black sooty-looking blotches, to be seen here and there upon his skin, were vibices or not—they seemed to be; but sundry large and isolated vesicles were seen upon his body, and scattered over his lower extremities; some as large or larger than a partridge egg, and in the course of three or four hours thereafter his toes were each completely vesicated. His tongue looked as if it might have long been macerated in filthy water; it was thick and flabby, and covered with an unusually heavy and dirty-ish white fur, and his breath was nauseously offensive. He had been, and was now vomiting a black matter, similar to that described in the last case. Very soon after lying down he became more and more insensible, but he would still reply pertinently to questions. Not long after this he lapsed into a deep comatose condition, and so remained almost lifeless during that day and night, and until daybreak; he then revived somewhat, and for a time his pulse became perceptible at the wrist, and he seemed to be more rational. All these more favorable signs were, however, but as "the last flickerings of the candle in its socket," for in a brief hour's time they vanished, and he sank and died after an illness of forty-two hours.

Case III. The same visit brought me in contact, for the first time, with the case of Stephen, a remarkably stout and athletic fellow, some twenty-two years of age. Stephen had first complained on Monday, the 14th, forty-eight hours since, of pains in the back of the head and neck, and had then some little fever. My partner saw and prescribed for him, as also, in passing, on the next and intervening day, although his employer then thought

him so much better, so nearly well, in fact, as not to need any further prescription. He was sitting up at the time of that visit, and thought himself to be nearly well. The pains in the head and neck were now, he said, nearly gone. He was directed to put his chin upon his chest, but was greatly surprised to find that he could not, and was made to *cry aloud* at the unexpected severity of the pain which the attempt produced—otherwise he seemed then to be but little sick. The following was the condition in which I found him sixteen hours after this: Wednesday, 16th, 6 A. M. His negro companions reported him to have been "right crazy all through the night," and that it had required the constant attention of two or more of them to keep him out of the fire. He was now extremely restless and uneasy; was turning about upon his bed, and making incessant efforts to get up and walk or crawl into the blazing fire before him. His head was now drawn rigidly back, and fixed towards the spine, so that no proper amount of force could move it. He seemed not distinctly to apprehend, but answered, rather mechanically, some questions addressed to him. He had several times vomited copiously during the night, as he subsequently did, a very black matter, "like soot and water." His bowels, too, had been very freely purged; his stools very black and offensive. His tongue and breath were in every respect like as in the last described case. His face and forehead were uniformly swelled, and what a few hours later presented a very singular appearance, were sundry pulped or swollen bands, or ridges, of a finger's breadth and thickness in size, standing from the apex of the head as their common centre, diverging thence like the radia of a circle, and extending over the occipital and parietal regions, quite down to the base of the skull. Some hours later in the day these swollen bands had expanded and coalesced so that the entire scalp presented a uniformly swollen appearance—this swelling was of an infiltrated or dropsical character, the scalp itself presenting nothing of an inflammatory appearance. Isolated vesicles and vibices were scattered here and there over his person, as in the other cases. His pulse, unlike in any other of the cases, was slow, full, soft, compressible, and about sixty per minute. A few hours later, when he had sunken into a profound lethargic condition, it fell to forty-six, and so remained as long as it could be distinguished. In this condition, seemingly, as much dead as alive, he remained until the afternoon of the following day, the 17th, when, after an illness of between four and five days, he died.

But not to protract our writing to an undue length, I shall forego the task of describing two other apparently as desperate cases, which were seen by me this morning, and yet others which were soon subsequently visited and treated, and which differed from these simply in degree of virulency, and with less embarrassment than I felt at the moment of encountering so unexpect-

edly so many and desperate cases, I will proceed hastily to offer some suggestions as to the nature and cause, diagnosis, prognosis, and treatment of this malady.

What then is its nature? Struck with the novelty and the gravity of the symptoms here grouped together, and manifested in so many cases simultaneously, we were at once convinced of the existence of some new and peculiar epidemic, dependent, like all other epidemics, for its causation upon some supposed, specific, atmospheric condition, the peculiar character of which may well be a subject of conjecture, but possibly may not soon be demonstrated. The pains in the back of the head and neck, the soreness upon pressure over the nape of the neck, and in some cases down the track of the spine, the marked opisthotonos—the general sensitiveness to the touch and the irregular spasms of various sets of muscles, now here and now there, together with the manner of death, satisfied us at once that we had here some disease of the brain and spinal marrow; but we had, coexistent with these symptoms, a diseased state of the skin, with vibices and vesicles so intermingled, as we had no where else observed them, or known them to be observed—he had a most striking and peculiar offensiveness of the breath—he had black vomit, and he had singularly black and fœtid dejections, a sum total of ugly symptoms, which argued a poisoned condition of the entire blood, and marked the onset of some specific and malignant, or pestilential fever. The rapidity of development of so many and virulent symptoms seizing upon one apparently in perfect health, and hurrying him to his grave in the short space of twenty hours, clothed with all the insignia of the most malignant disorder, was altogether sufficient in our judgment to negative the idea of simple inflammation of the brain and spinal marrow, whether of their substance or coverings, singly or jointly; or of inflammation of the same tissues as it may be supposed to be modified and intensified, as in the case of other inflammatory diseases, by that superadded something which has given to it the more serious character of an epidemic. Such were our suspicions of its malignant febrile nature, when, as yet, we could not name it, and when we had had no opportunity of consulting the opinions and experience of others. We were subsequently gratified to find in the books so correct a portraiture, in the main, of our epidemic, as to leave no doubt upon our mind of the identity of the diseases, notwithstanding the superaddition, in this instance, of certain very grave symptoms, which we have not seen mentioned as attaching to either of the several epidemics elsewhere prevailing. As before, we have again to express much regret at our inability to institute any post mortem investigation into the nature of the anatomical lesions attending upon our epidemic. We feel perfectly confident, however, that had the search been made, we should have seen what other investigators have deduced

as the common lesional expression of that disease, which they have named "Epidemic Cerebro-Spinal Meningitis," and which, in the words of another, has been summed up as follows: "Its general pathological characters were nearly uniformly the same. The *substance* of the brain and spinal marrow appeared to be remarkably free from disease: there was no unusual vascularity, induration, or softening, apparent: nor did the ventricles betray any evidence of inflammation. In many of the cases, however, the brain and spinal marrow proved to be implicated. It was believed, however, in these cases, to have been evidently propagated to the substance of the cerebro-spinal axis from the membranous investments. The meninges of the brain and spinal marrow, in all cases where any pathological lesion at all was manifested, were found to exhibit the results of inflammation—vascularity, purulent deposits, etc., etc."

Whether, in the examination of our fatal cases, we should have found other lesions than these—whether, in the cases where a very marked squinting was present, we should have found what Andral says it denotes—"arachnitis of the ventricles"—whether the organism of the stomach and intestines, *which, in all previous investigations proved to be exempt from evidences of disease*, would have been impressed with the signet of the morbid symptoms which we have mentioned as peculiar, perhaps, to this epidemic we cannot say with any positiveness. We are strongly persuaded, however, that we should, at least, have discovered upon the mucous membranes some such ecchimosed evidences of disease as are found in cases of purpura hemorrhagica, and these in turn might have been made to explain the source, and pronounce upon the nature of the black vomit and the black fœtid evacuations which mark, so peculiarly, so many cases of this epidemic; for, after all, these excretions may have consisted simply of blood deteriorated or disorganized, as in cases of purpura, typhus, or low typhoid fever, exuding through the capillaries of the ecchymosed surfaces, and still further modified by admixture with the gastric and intestinal secretions.

But, not to be tedious, it may be inferred from all that we have said, that we regard this disease as a low, malignant, and peculiar type of fever, with uniform cerebro-spinal complications; and we apprehend that a still more advanced pathology may one day establish the fact that it rests upon a specifically depraved or poisoned constitution of the blood with a corelative, very faulty and deficient innervation. If there still be those who may be disposed to view it as essentially an inflammation of the brain and spinal marrow we would here only point further to the results of treatment, confident that they must sustain our notions of its pathology, or they will annul all our pre-established teachings as to the adaptability of the antiphlogistic treatment to inflammations.

As to the communicability of this disease we may remark here that we saw nothing to suggest, but everything to rebut any suspicion that it was propagated by contagion.

In relation to its diagnosis, it may suffice, after what has been written, to say that, if along with a low or typhoid type of formative fever, which, in some cases, is extremely evanescent, we find a patient complaining of pain in the back of the head and neck, with a rigid or retracted condition of the neck, and may be of the entire trunk; if there is tenderness upon pressure over the nape of the neck and may be down the track of the spine, (*symptoms which were present in every one of our cases,*) and if to these are added a painful sensitiveness to the touch over the general system, and partial and irregular spasms, sometimes *clonic*, sometimes *tonic*, and again of a mixed character, of various sets of muscles, we shall recognize a combination of symptoms diagnostic only of simple cerebro-spinal meningitis. But, if to all these is added a manifest epidemic character, we may feel assured whether or not it may be marked with the grave symptoms which we have before described, and which, in several cases, appeared synchronously with those above given, that we have encountered a disease, *sui generis*, and which can be no other than that which we have attempted to portray.

It is worthy of record, in this connection, that the subjects of this epidemic, as in all the European epidemics, were selected exclusively from the young. It is said that in Europe, no person over the age of thirty-six years, has been known to have it, and in some of their epidemics it was strangely enough confined almost exclusively to males under twelve years of age. With us, males and females were alike attacked, and the ages of our patients ranged from three to twenty-two years. One nursing infant under one year, and one (white) male, thirty to thirty-three years of age (not under our care) also died of it.

Prognosis.—The mortality everywhere attending this disease has been truly frightful. It has not been equaled in all the ravages of that dreadful scourge, the Asiatic cholera, for while the fatality attending the last has been stated as varying, in different localities, from 38.5 to 55.8, it is acknowledged that not less than eighty per cent. of all the cases of this disease which have occurred in France have proved fatal. We are sorry we are without the means of ascertaining its relative mortality in other countries, and particularly in our own. We infer, from the slight references we have seen to these last epidemics, that they too were attended with a very large proportionate loss of life. Of the seventeen cases, the whole number that occurred in our epidemic, nine, or more than half, were fatal. We were called to treat thirteen of these cases; of this number we lost six, and mortifying as was to us the loss of so many patients, we have yet to congratulate ourselves that the ratio of recoveries was considerably greater than

the general average in similar epidemics. In estimating the chances of recovery, we have first to say, in the language of another, that "where symptoms of extreme collapse show themselves from the commencement, all the resources of our art will prove unavailing." With us, as elsewhere, persons apparently in perfect health and spirits, were attacked and suddenly became completely collapsed, evincing at the same time a deeply contaminated condition of the entire blood system, and died in the short space of twenty hours. We are fully persuaded that in such cases—and they constituted about half of our fatal ones—it is perfectly vain to attach much importance to any plan of treatment, for the patient is well nigh moribund when he is first seen, and the morbid phenomena are of such rapid development as to defy the curative appliances of our art; but in other cases, and they are to be individually judged of rather by the general aspect and strength of the patient, and by the force and gravity of the reigning symptoms, than by any special indices, we should not be without good hope, that time being given to impress the system with medicines, the mortality of this disease may be still further and considerably diminished.

Treatment.—It is, we believe, an admitted axiom, in medicine that different epidemics of the same malady exhibit not merely different degrees of intensity, but are often marked, each with its own peculiar symptoms, and to such an extent sometimes as almost to persuade us of their non-identity. Hence, perhaps, often arise discrepancies of opinion and disputations, as to the merit of respective plans of treatment, and as to the adaptability and value of particular remedies. Epidemic febrile diseases are especially fruitful of these different opinions and practice as they may be associated with every several grade of high and inflammatory, or low and typhoid types of fever. The identity of the several recorded epidemics of this disease has been proven by nothing more clearly than by the uniformity of the pathological lesions which the dissecting knife has revealed, and which were seized upon at once to give to the new malady a name suggestive only of inflammation of the meninges of the brain and spinal marrow. This being the idea of its intrinsic nature, it is not surprising that the antiphlogistic should have been first thought of as the proper plan of treatment for it; and there may yet be those who, influenced by a name and the anatomical lesions so uniformly associated with it, would look to that as the most hopeful general treatment. Other epidemics must surely have been marked by a much higher grade of fever, judging from the heroic energy with which that system of treatment has been prosecuted, and must, therefore, have afforded fitter opportunities to test the worth of the antiphlogistic treatment; but, even these, experience has not pronounced in favor of it, and we, anxious, as we were, to dis-

cover any promising means of cure; but, accustomed as we have been to judge of the admissibility of blood-letting, etc., only by the state of the pulse and the general aspect and strength of the patient, could not bring ourselves, with all the evidence before us of the radical prostration of the vital energies, to adopt it—except tentatively in the commencement of only one or two cases. We have no hesitancy now in saying that in epidemics precisely like this, and accompanied with the same grade of fever, we would wholly exclude the lancet from use. Topical depletion by cups to the nape of the neck and along the spine was practiced in one or two cases, and may prove useful if resorted to early, in the commencement of cases where the pulse and strength of the patient do not contra-indicate it. But we have to avow our decided preference for, and very considerable confidence in, an entirely opposite plan of treatment; and we have gratefully to acknowledge our indebtedness to others for the suggestion of a remedy which, because of our preconceived notions of its non-adaptability to congestive and inflammatory diseases of the brain, we should not have ventured to employ, but which we would now make a substantive part of a stimulating and supporting plan of treating this disease. That remedy is *opium*. We would early resort to it, and give it at *regular intervals* of from two to three hours, and in doses of from a fractional part to one grain, graduated according to the age of the patient, the degree of nervous prostration and the extent of its toleration short of producing a too profound narcotic effect. It is surprising, too, to what an extent it may thus be regularly used and tolerated. We have given in this way four, six, eight, ten and twelve grains in the twenty-four hours, and for several successive days, and instead of becoming dull and drowsy, or stupid and comatose, our patients have become more wakeful and sensible: the previously vacant and staring or contracted and *squinting* countenance has assumed a more natural and intelligent expression, and the prevailing nervousness, the rigidity and contraction of the muscles, and the tendency to partial or general convulsions, have all, more or less, rapidly improved and disappeared. It is remarkable, too, that thus freely given it did not seem, in most cases, to manifest its usual constipating effects. We have associated with it the equally regular use of quinine in doses of one or two grains or less, and where general nervousness was present, we have added camphor or carbonate of ammonia, and the regular and *free use of alcoholic stimulants pro re nata* In one or two cases, where in the earlier stages there was something more of a sthenic condition of the system, or where we had reason to think the secretions were at fault, we combined alterative doses of calomel, for a time, with the above medicines. Struck as we were with that peculiar condition of the skin, so like in its general aspect to purpura hæmor-

rhagica as at once to suggest a like pathological condition of the blood and of the sanguiferous system, we early decided in favor of the administration of that remedy which has proven itself almost a *specific* in purpura, and it also—the spirits of turpentine—was regularly given in from ten to fifteen drop doses every two or three hours. What curative influence it may have exerted as thus combined, it is of course impossible to decide; but we have acquired, from long experience in its use, such confidence in its virtues in purpura, that we would regard it culpable in us not to give it in any apparently like and serious affection. These internal remedies, with the early and free use of vesicatories to the nape of the neck and along the spine; with rubefacient frictions, sinapisms, etc., etc., together with a *nourishing and digestible diet*, (and we would attach very great importance to a nourishing diet,) constituted our chief treatment in the late epidemic; and we are pleased to be able to say that it proved to be successful in nearly every case where it was instituted early enough, and where sufficient time was allowed to impress the system with any sort of medication.

Protracted as is this essay, we feel assured that we shall do a yet more acceptable service to those who may not have seen, or like ourselves may have forgotten, their writings by quoting very briefly, in conclusion, some apposite remarks of eminent French authorities upon the use of opium in this disease:

"M. Chauffand," it is said, "persuaded by a variety of circumstances, that the disease was not a simple meningitis, as supposed by M. Forget, but was really depending upon some specific although unknown cause, set himself, with much assiduity, to compare the results of different modes of treatment. The most powerful antiphlogistic and revulsive remedies were used in some cases; in others, emetics, purgatives and contra-stimulants; and in a third set, tonics and cordials were resorted to. Now, all these methods, *whether employed singly or combined, the one with the other*, proved so unsatisfactory, that the medical men often felt puzzled what to do. It was most melancholy to see young, healthy patients sink, sometimes within forty-eight hours, as if they had been struck with a poisoned shaft, and every means, that were tried, utterly fail in arresting the fatal issue. At this time M. Chauffand having accidentally administered a dose of opium for the relief of some particular symptom in a young girl, who was very seriously affected with the epidemic, was surprised to find that, instead of lulling his patient to sleep, it had made her more wakeful, and had also diminished the retraction and the stiffness of the nape of the neck. On trying the remedy in other cases he observed nearly similar results, and he found that, in no case, did it seem to increase the cerebral congestion, or to impair the activity of the vital energies." The following is the author's

ART. IV.—*Liebreich's Operation for Cataract.* By W. GASTON BULLOCH, M. D., Professor of Surgery, Savannah Medical College.

My attention having been directed for some years past to ophthalmic surgery, I have had numerous calls upon me to treat cases of cataract, and in consequence have diligently sought after everything new which promised better success than the old methods in the treatment of this unfortunate malady. In operative proceedings I began with the old fashioned method, by couching or depression of the cataract, and although I had failures, yet a good proportion were successful. In one case, a Mrs. Esther Stewart, assisted by Dr. C. H. West and Dr. James Berrien, I operated, in 1859, on both eyes, at one sitting, with perfect success, so that ever since, with cataract glasses, she sees to sew, to read, or do anything she wishes. Subsequently, I adopted the old flap extraction method with good success, and in traumatic and soft cataracts I have operated successfully by the linear extraction of Gibson and Travers. Of late years I have been operating by Von Graefe's "modified linear extraction" method, but have not been pleased with it, chiefly on account of the disfigurement of the eye produced by the large iridectomy. Since the appearance of the number for January, 1872, of the American Journal of the Medical Sciences, in which I saw for the first time the representation and description of the "new method of extraction of cataract," devised and explained, by Liebreich, (see St. Thomas's Hospital Report, Vol. II.,) in which he sets forth the disadvantages of Von Graefe's method, and the advantages of the new method, I was so much pleased with its simplicity that I determined to try it on the first case of cataract which should be presented to me favorable for operation. I did so, and have been pleased with the result. I have now operated by this method six times, including operations on both eyes of one patient successively at one sitting, with complete and permanent success, at least up to date. The subject of this double operation, the Rev. Leonard C. Peck, of the South Georgia Conference, residing at Boston, Thomas County, Georgia, was operated upon on the 25th of April last (1873), and I have now a letter from him, written by his own hand, in which he says, he "sees the telegraph wires, two hundred yards off, and has resumed his pastoral duties."

Of these six cases, of operation by the new method, only one was a failure, and that was the case of Mr. Holmes, upon whom I declined repeatedly to operate, in consequence of his cachectic condition, suffering, as he was, from albuminuria, and with his system charged with malaria. I finally yielded to his urgent appeals and importunities, and operated, more to gratify a longing once more to see, than with any expectation of success; the failure

was not unexpected by me, though his hopes of again beholding the familiar faces of friends, and the bright world around, were doomed to disappointment. Mr. Girardeau, of Liberty County, a man of seventy-six years of age, was the first, and a successful case. Cato McCall, a favorite servant of Mr. Heyward Gibbons, from the Shaftsburg Plantation, on the Savannah River, with double cataract, was sent to Dr. J. Harriss for relief. At Dr. Harriss' request I operated, assisted by Drs. Harriss, Habersham, and Houstoun, upon the right eye successfully, by Liebreich's plan. I did not operate on the left, because it had unaccountably been inflamed for some weeks before, and was still somewhat reddened when I operated on its fellow. On the 14th of May last I operated by this same method on the left eye of Mrs. J. Gallandet, a lady of near seventy years of age, with equal success.

It is seen by the above notes that I have not reported the cases in detail or clinically, but cite them as a contribution to the success of M. R. Liebreich's method, which so far meets my hearty approval and commendation. I followed Liebreich's directions in making the incision downwards, with Graefe's knife, without iridectomy, and without narcosis; but not possessing the same confidence as that great surgeon in my own skill, I did not do away with an assistant, with the elevator, nor the fixation forceps. I report these cases, few though they be, with my commendation, because I have not seen any record of cases in American Medical Journals of operations of this sort performed in this country, and because I desire to draw the attention of the profession to a method of operating for cataract which certainly promises many advantages. (For description of the details of the method, I refer the reader to the St. Thomas's Hospital Reports, or the number of the American Medical Journal above named.)

In conclusion, I would take occasion to admonish all who undertake it, to remember, in making the puncture and contra-puncture, not to penetrate the sclerotica, but to incline the knife in puncturing so as only to incise it at an angle of forty-five degrees, simply shaving the corneo-sclerotic junction. Again, to divide the operation into stages so marked that the eye may recover from the shock of having its coats punctured. To be cool, collected, gentle, and slow in executing the several stages of the operation.

ART. V.—*Report of a Case of Hemorrhagic Malarial, Icterical, Fever.* By GEO. DOUGLAS, M. D., of Union County, S. C.

On the morning of the 26th October, 1872, I was requested to visit Mr. J. C., aged forty-five years, who, at intervals, during

the Summer and Fall, had chills and fever, which had impaired his general health, but not sufficiently to prevent him from attending to his duties as a planter. Saw him at ten o'clock A. M. He informed me that on the previous day he had fatigued himself very much, getting some hogs out of his fields, and after getting back to his house, being very thirsty, drank a large draught of cold water, and about an hour after was taken with a chill, which continued about an hour, with nausea and vomiting. He directed my attention to his chamber mug, which was half filled with bloody urine, which he passed without pain. Present symptoms: Pulse eighty, soft, regular, and of good volume; tongue thin, pale, and flabby; temperature but little above the normal standard; skin soft and slightly tinged yellow; nausea and vomiting; the matter vomited grumous bile of a dark green color; complains of a pain extending across from the spleen to the right kidney; bowels constipated. Treatment: Blue pill fifteen grains, quinine sixteen grains, divided into eight pills; one to be taken every two hours. If, in two hours after taking the last pill, his bowels do not act, give the white pill, which contains twenty grains of calomel. On the 27th, nine A. M., medicine acted well, (took the calomel.) I did not see the alvine discharges, but understood they were consistent, and of a dark green color. Symptoms: Pulse ninety, regular and compressible; tongue not so pale and flabby, covered with a thin brown coating; nausea and retching to vomit, distressing thirst, urgent calls for water every ten minutes; says nothing will allay his thirst but a stream of cold water continually running down his throat, which is always dry; says he feels double, or like two persons; says everything he drinks tastes as if it had sugar in it; urine still bloody; skin deep tinged yellow; mind clear. Prescription: Sulphate quinine twenty grains, pul. doveri twelve grains, capsicum ten grains; make into eight pills—one to be taken every two hours, with a teaspoonful of spirit of nitrous ether. Chlorate potash, drachm ij., dissolved in half gallon of water, given as his constant drink, and only in light draughts. October 28th, seven P. M. Had an urgent call to visit Mr. C. this morning. On my way met a friend of his, who had spent the night with him. He informed me that patient had a bad night of it; between midnight and day had a chill, and he did not think he would survive the day. On my arrival I found him in a collapsed condition; his countenance pale, and expressive of great anxiety; his surface cool; extremities cold; respiration labored and stertorous; pulse small, feeble and frequent, over one hundred; skin deeply tinged of a brown color; urine bloody; kidneys acting freely; great restlessness; nausea and retching. He asked me if there was any hope for him. I replied that I thought there was still hope; begged him to compose himself, and be as still and quiet as possible. I had additional covering put over him; warm bricks placed around him;

directed a warm mustard foot bath, and gave him a large teaspoonful of chloroform in half an ounce of camphor water, with half a grain of sulphate morphine. Took a seat at his bed side, kept him covered, and encouraged him to hope for the better. In half an hour he went to sleep; slept two hours; on waking up expressed himself as feeling much better; thought he might yet get well. Reaction was taking place; his surface was assuming its normal temperature; his pulse down to ninety, and of pretty good volume; countenance more animated and cheerful; complains of great dryness of his throat, which he thinks is the cause of the nausea. I prepared a solution of bicarbonate of soda and a solution of tartaric acid, in separate bowls, and instructed his wife how to administer them: to take a tablespoonful of the soda solution and two-thirds of a tablespoonful of the acid solution; insinuate one spoon between his teeth, with his mouth opened, pour them together, and let him swallow. This to be repeated as often as he complains of dryness of his throat. This mode of administering the effervescing draughts had a happy effect in controlling the nausea. R. Quinine twenty-four grains, pul. dover twelve grains, piperine twelve grains: make into eight pills. Give one every two hours, and continue spirits of nitre. Ordered chicken soup, His bowels had acted twice during the night. October 29th, eight A. M. Rested well through the night; perspired freely; altogether better; urine clear, of a straw color; skin not so bronzed; pulse down to normal standard; tongue clean; says he feels like a new man, but still feels as if he was double; appetite much better; relishes his soup, and would like to have something a little more solid; feels very weak. R. Tincture perchloride iron fifteen min *ter in die*, alternated daily, with fifteen min. diluted hitrochloric acid. His recovery was slow, but permanent. His skin gradually assumed its normal color. The peculiar feeling of being doubled continued for several days after he was able to sit up.

Remarks.—This being the first case of this disease I have seen, I shall not encumber your pages with any speculations of my own in regard to its pathology, but there is one fact which presents itself for consideration. In all the cases which I have seen reported, chill and fever of the ordinary form, for a longer or shorter duration preceded the hemorrhagic attack. The alternate congestions and reactions, in the ordinary, seems to have predisposed to the hemorrhagic or malignant form. Dr. Osborn, of Greensborough, Alabama, in his letter in reply to Dr. Hammon, advances this view: (I quote his language.) "It is only after a series of innervations and ennervations; of shocks and reactions; of excitements and rests; of paroxysms and intermissions, that the source of nervous irritability becomes exhausted, and the destructive process of toxæmia begins. As long as the ganglia and plexuses retain a normal integrity, but little, if any,

disorder can occur in the healthy constitution of the blood, for it is to this power that its vitality is intrinsically due." But just here a very interesting enquiry presents itself. The disease under consideration is certainly a new form of malarial fever. For more than forty years I have been conversant with chill and fever, and, previous to the introduction of quinine as an antiperiodic, the cases were generally protracted. I have known neglected cases eventuate in anasarca and ascites from hypertrophy of the liver and spleen, but have never seen a case in a practice of near half a century, bearing the same characteristic features as Mr. C.'s case.

For the information of the readers of your journal, I respectfully call attention to an article, by R. F. Michel, M. D., of Montgomery, Alabama, published in the New Orleans Medical Journal for July, 1869, which gives a very full and lucid history of this much to be dreaded Hemorrhagic Malarial Icterical Fever.

ART. VI.—*Chloral Hydrate in Malarial Fever.* By T. P. BAILEY, M. D., Georgetown, S. C.

Perhaps no medicine in the materia medica has received from the profession more attention than chloral. It is very generally the case, that the laudations bestowed on a drug contribute much to the disappointment of those who are apt to expect too much from the *modus operandi* of what may be regarded in the light of a specific, without any reference to the ever changing phases of disease. But recently our medical journals teemed with the wonderful triumphs of chloral, and the comparative silence now maintained indicates that the article has found a proper place among our remedial agents. In spite of the animadversions of some, it is unquestionably a great addition to our agents, not only as purely a hypnotic, but as possessing other properties, useful in that prominent and obscure class of neuroses, it certainly plays an important part as a very valuable adjunct to other treatment.

From the time of its first introduction, by Leibreicht, I have found it a very useful and important agent in the febrile stage of intermittent and remittent fevers, more especially in those types of a congestive nature.

When the fever heat is intense, its refrigerant and calmative influence is undoubted; and while it quiets the nervous system, it rather promotes the secretions—in this particular being far superior to the opiates. In the malarial fevers of children, with a tendency to convulsion, or when this unfortunate complication has supervened, it can scarcely be excelled. Although we know that the first impression on the gastric surface is rather to excite

emesis, nothing can be more demonstrable to me than its promptness in arresting the vomiting in these fevers when all other efforts have been fruitless. I have frequently stood by the bedside and administered a dose, remaining long enough to note its effect. I have enjoined upon the sick the importance of resisting vomiting for ten minutes, and I do not know of a single instance of its return after the chloral mixture has been retained and kept up during pyrexia. Its rapidity of action does not require its retention long, before we have obtained its expected results.

A few months since I was summoned to a patient who had been vomiting for twenty-four hours, with small, frequent pulse, and all of the signs of capillary stagnation or the congestive termination of fever, and with the use of chloral, which paved the way for other treatment, I succeeded in bringing on a favorable reaction, and afterwards complete apyrexia, which was sustained by the use of quinine. This is one of several similar cases that have not been particularly recorded. With the proper use of mercurials and diaphoretics, *made effective by the use of chloral hydrate*, I have experienced the most gratifying results.

Patients have suffered almost as much from the secondary effects of opiates as from the original disease. Chloral never produces such results. Under its use the rapid oxygenation of the tissues has been prevented, and a manifest decrease of heat of skin, with lowered frequency of pulse has been recognized. A patient will speak of the impossibility of making a dose "stick," but if he vomits, it is only an indication to repeat the medicine. *He will retain a little*, and that little repeated, finally controls the gastric irritation. Of course a tongue, red and dry, *with* gastric tenderness, and other special indications, *may* contra-indicate its use, but a mixture like the following is seldom used without good results:

R. Chloral Hydrat.....drachm i. ss.
Potass. Bicarb.....scruple ij.
Spirits Æth. Nitros.....ounce ss.
Syr. Tolu.....ounce ii. ss.
Aquæ.....ounce i.—m.

S. One tablespoonful every hour or two, as may be necessary.

Where the cephalalgia and lumbar pains are great, a fraction of a grain of morph. sulph. may be added to each dose of the mixture. The combination seems to prevent the remote unpleasant results of the morphia. It is rare that I use the opiate in combination, as the constipating effects are sometimes unpleasant, and necessitate more medicine.

There may be nothing original in these observations, but it is possible they may be of some use to the profession.

ART. VII.—*Case of Purulent Diathesis.*—By ALEX. FOSTER, M. D., of Georgetown, S. C.

A. C. B., a child of eleven years of age, of sanguineo-nervous temperament, having enjoyed previous good health, was attacked in July, 1870, with a painful swelling in the right lumbar region. This slowly increased, and the pain and slight swelling extending down the iliac region to the groin, seemed to indicate the existence of psoas abscess, which would open in the inguinal region.

At the end of about two months, however, the abscess pointed above the crest of the ilium, and when opened discharged eight or ten ounces of pus at one time. It continued to discharge for some weeks, after which the little patient recruited rapidly under the use of iron and cod liver oil, and became more robust than before the attack.

During the next summer another abscess formed on the left side, just below the axilla, which in three weeks time pointed, and was opened. It continued to discharge for two or three weeks. After this second abscess the child soon recovered, and remained in good health for more than eighteen months.

Some time in February last she was attacked with what at first appeared to be simple intermittent fever, of quotidian type. No pain was complained of in any region of the body, the appetite and digestion continued good, the bowels were regular, there was no cough or embarrassment of the respiration, and the patient could lie comfortably in any position in bed. Remembering her previous history, and the pyogenic tendency exhibited in her previous attacks, a careful examination was made, from time to time, of every portion of the body, but without detecting the slightest symptom of abscess, or of local inflammation tending to abscess. No tonic or antiperiodic remedy seemed of any avail; the fever returned persistently every day, assuming more and more the character of hectic, and the patient became very much emaciated. In the absence of all but negative symptoms, the only conclusion that could be formed was that this was a case of general tuberculosis.

This condition of things continued until the latter part of May, when the little patient was seized in the night with a sudden and violent cough, and in the course of an hour she expectorated several ounces of purulent matter. She was extremely exhausted, but complained of no pain previous to or during the coughing. There was then, for the first time, dullness over the right lung, as high up as the lower edge of the scapula, and a mucous *râle* throughout this lung. The expectoration continued profuse for two days, when suddenly it almost ceased. The epigastric and right hypochrondriac regions became swollen, and in a few hours a profuse diarrhœa came on, a large portion of the first discharges

consisting of purulent matter. For the first time during her illness the patient's appetite entirely failed, and she seemed, for a time, about to die of exhaustion. But in a few days the diarrhœa was checked, the purulent expectoration again made its appearance, and the appetite gradually returned. The abscess continued to discharge itself, sometimes by the lung, and sometimes by the bowels, the quantity of the discharge gradually diminishing. In a short time the hectic began to abate in severity, and the child, now reduced to little more than a skeleton, began to rally.

The constant lying on the back (which position in her extreme exhaustion seemed most agreeable to her) at length produced a bedsore over the sacrum, and a succession of little abscesses formed in the cellular tissue about the nates.

At the present time (July 15th) there is still a little discharge from the abscess, both by the lung and the bowel. The bedsore is slowly healing, and the small abscesses have ceased to discharge. The hectic is slight, and the cough troubles very little. The lower portion of the lung is still dull on percussion, the bowels inclined to be loose, the appetite good, and the countenance cheerful. She sits up much during the day, amuses herself with books and doll, has gained slightly in flesh, and has commenced to walk with assistance.

The remarkable peculiarity of this case consists in the entire absence of any local symptoms which might indicate the formation of an abscess, or of the existence of inflammation in any part of the body. Pressure was borne over every portion of the abdomen, and percussion and the stethoscope showed no sign of lung affection.

What was the location of this abscess? It was large, as the quantity of pus discharged evidently proved. The freedom from pain, cough, and difficulty of respiration, even without the stethoscopic negation, would forbid the supposition that it had its origin in the lung. The absence of pain, swelling and tenderness in the right hypochondriac region (until after it had opened into the lung, and was about to open into the colon,) the clear and unjaundiced complexion, and the regular secretion of healthy bile, render equally improbable its location in the liver. The previous abscesses were certainly in the cellular tissue, and as it appears impossible to locate this one in the parenchyma of either lung or liver, it must have been in the connective tissue between these organs.

July 22d. The patient is still improving slowly, the cough has nearly ceased, expectoration very slight, and only mucous, the dullness confined to the lower portion of the lung, the bowels still loose, but the evacuations showing no purulent matter. The hectic, after four months continuance, has at length ceased, the appetite and digestion are good, and the patient gains flesh and strength slowly, but evidently.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

ART. VIII.—1. *Transactions of the Medical Society of the State of Pennsylvania, at its Twenty-third Annual Session, Franklin, Pennsylvania. Vol. IX., p.* 1. *Philadelphia,* COLLINS, *Printer,* 1872; *p.* 260.

(*Address in Obstetrics.* By WASHINGTON L. ATLEE, M. D., of Philadelphia.)

Our object in noticing this volume at the present time is not so much for the purpose of criticism, as to furnish some practical views presented therein by Dr. Atlee upon the *Use of the Speculum and the Diagnosis and Treatment of Diseases of the Uterus*—whilst we take occasion also to discuss the subject of Gynæcology with regard to some of its social aspects. We wish also if we have space to call attention now or at a future time to some of the Reports contained in it on the management of scarlet fever which are, we think, extremely interesting because ice and cold water externally used were freely and successfully employed. Papers by men of experience and authority often remain buried in the Transactions of Societies and they do not reach the great mass of the profession; as our aim throughout is utility, we shall endeavor when occasion offers, to select the most valuable of these and make them the special subject of consideration for the benefit of the readers of our journal. For this purpose it is with great pleasure that we give the following digest of the views and the practical suggestions of so capable and distinguished an authority as Dr. Atlee.

Besides, this subject of uterine pathology and the ever growing practice of uterine surgery as an almost distinct branch, has become so highly important that many points connected with the manner and methods used are worthy of attentive consideration from us at the present time. We desire also that our readers may learn from what follows the opinions of our author, and to what extent he agrees with other authorities.

It appears to us from our own observation, that there are several sections into which the school of uterine surgeons, practitioners and manipulators are subdivided, and as in this review we are speaking generally of what seems to be the condition of things throughout our country and not with reference to any special locality, we do not hesitate to designate them here: The Surgical one, which, when it reaches an abusive extreme (and only this we condemn in each) is prone to the frequent use of the

knife or the scissors; that section which manifests an equal proclivity to the swabbing out, scarifying, injecting, or irrigating; another which is always hastening to introduce probes, electro-galvanic catheters, sponge, sea-tangle, or medicated tents; or the one which seeks continually to rectify an excreting organ not much larger than an almond—which is suspended by muscles, themselves and it flexible in structure, and lined with a sensitive membrane—by metalic stem-pessaries, redressers, and other devices of every conceivable shape and form. A large part of the ingenuity of a medical man seems now to be devoted to rectifying and correcting this organ. We who would not lay claim to any very great experience—though we daily strive to add to it—are ourselves a believer in the utility of, and we employ many of the instruments devised by others; we would only declare, as we said, against the abuse of the methods and the instruments and the recurring to them too readily and without the fullest and most urgent reasons: as if the uterus was seldom or never free from an ulceration, an abrasion, a flexion or a version, and was never inclined to occupy its normal position. If there be a doubt let not this organ always get the benefit of it and undergo the searching process—upon the assumption that there the *punctum saliens* of all disease will happily be found.

Dr. A. does not himself enter very fully upon the ethics of the question, but he is undoubtedly a strong advocate for the use of the speculum at least, and other means also under certain conditions. Before concluding, he quotes from the Code of Ethics in favor of examinations when requisite and necessary, and he employs this strong language, which we cheerfully give:

"If, therefore, the eye be the main avenue through which we obtain a knowledge of disease in all other parts of the body, no exception should be made, through prejudice, or false delicacy, or prudish affectation, in the study and treatment of disease in an organ, whose normal functions are not only essential to the comfort and happiness of the gentler sex, but of paramount importance to the welfare of the whole human race. In science, in arts, in medicine, in morals—'to the pure all things are pure.'"

If no fallacy is contained in the above, we yet think that dangerous encouragement is given which may lead astray the unwary, or those who may not be disinclined to go very far in the direction indicated by our author—for whom, it may be already seen, we have the greatest respect and regret that on this point we have to make an objection with regard to the effect which his advice may produce. We would have been better satisfied if he had distinguished more clearly the *class* of cases in which digital, speculum, or other examinations are unjustifiable—or, at any rate, had given some salutary cautions on the subject.

Whilst yielding perfect deference to the high source from

which the maxim is derived, we *deny* that "to the pure all things are pure," in the sense that we may *do* all things to the pure *because* they are so—specially anything which, without the most peremptory need, may *tend* to render them less so. But surely all things are not expedient; *use*, we know, "doth breed a habit;" there are such qualities as sensibilities which are often exceeding keen and acute—nothing more so in all nature—for what can surpass the shrinking modesty of those in early age who have been tenderly and carefully nurtured. The modest, we are told, blush even to name modesty ("*pudice, pudicitiæ etiam dicere, erubescunt,*") and such sensibilities should not be blunted nor their fine lustre obscured with impunity, *save under the most urgent necessity*, and this should be stated by all writers fully and emphatically. The medical scholar who is at all classical in his tastes cannot fail to be reminded of the "*Ut flos in septis*" of Catullus where the quality referred to is admirably portrayed. But did we make ever so full an acknowledgment of the truth of the adage or the applicability of it to the purposes in view, this will not warrant us in needlessly, or without dire necessity, subjecting the purest to processes which, though it be admitted for the moment that they do not take aught from her "purity," may yet deprive her in a measure of some inestimable charms which are to be considered and which give grace and attractiveness to her sex, viz: those derived from the conviction which is entertained of her simplicity, freshness and *inexperience*—the "*nudaque simplicitas, purpureusque pudor*," being as applicable now as in the days of Ovid. These are for her the true, "unsearchable riches" and if it be possible they should remain so. Words and fine maxims may often do little more than smooth over the inevitable effects of deeds and facts: the influence of which for good or evil, remains unfixed in, and more or less changes forever both body and soul—as the bank of driven snow (to use the fine simile of Mr. Macon, of North Carolina) when once broken or disturbed can never be restored to what it was before the rude touch had been impressed upon it.

There is much in this age of progress which would have seemed perhaps to those of an early period who preceded us as in some respects not a true advance, nor one wholly to be desired. To observe the innovations upon old established customs which are everywhere practiced might in fact fill some of them with astonishment—specially those whose sphere of usefulness was confined to the older cities which were marked by their highly refined conservatism, by the extreme delicacy and reticence which they were always accustomed to exhibit, in the strict guards which they maintained and preserved, in the selection of their cases for interference, in their bearing towards, and in the management of those entrusted to their care. We now speak of times in a part of which we lived and of men some of whom we

had the honor and the pleasure to know. In the medical education of the young physician, also, these, the most essential qualities, are far the most difficult to acquire: for, as no one gave him particular instruction with regard to the delicate rules of conduct which were to guide him in his after career, as his knowledge of them depended less upon study than upon instinct, and was not to be learned in the books, it required the greatest tact and perception to obtain it by his own observation. It was, indeed, more like a surrounding atmosphere which he inhaled, or a set of principles which he insensibly imbibed from observing the general tone, sentiment, practice and bearing of the most polished, the most noble and venerated professional men who gave character to and moulded and formed the growing manners of those who looked up to them as exemplars. Upon these only could he depend for his own guidance. Without pretending that we are to remain stationary and must never move out of the old ruts and grooves of the past, we yet question whether it be advisable or necessary to give up some of the finer traits and characteristics, or ruthlessly to break down the barriers established by the wisdom and prudence of those who were in many respects our admirable and deservedly respected teachers—without careful thought of the responsibility which we thereby assume.

We should not set ourselves up as censors, nor would we gain anything by blindly or ignorantly condemning the practice or the methods which reputable physicians chose in their best judgment to adopt; for how soon might our brethren retort upon others of us when fully tested under the "strong contagion:" "Friends, first take the *beam* out of thine own eyes!" And yet in the passing comments and the criticisms which as journalists we indulge in examining this address, which are made we hope with no narrow, contracted or local views, but with a sincere wish to discuss the subject before our readers with fairness, justice, and moderation, we would do so wholly with reference to the bearings of the question upon the welfare of the profession at large; and especially also as it affects that delicate and sensitive class often confided to our tenderest care and to many of whom, without the slightest straining at false sentiment may be seriously applied the terms given by that subtle humorist, Charles Lamb to something quite different: "Remember! *she* is a weakling, a flower!"

An eminent French physician who possessed both wit and experience, gave the following advice to an indiscreet enthusiast who was praising a new remedy then in vogue which was working the usual wonders ere being consigned to that *limbo* where so many of equally brilliant promise had preceded it: "*Eh bien, dépèchez-vous de vous en servir pendant qu'il guérit.*" This sage advice may be found applicable to many of the "gynæcological" expedients belonging to a branch of the

medical art which, thanks to the labors, discoveries, and suggestions of Sims, Simpson, Scanzoni, Emmet, Hicks, Wells, Thomas, the Atlees, Brown and others, has in the twenty years past made a true, splendid and marvelous progress. We would not wish to limit or condemn that progress, but we will hope that the false and the meretricious are being eliminated from it in this the "heroic age" of gynæcology; and its votaries will, as usual, pass through the transitional period to one of rest and greater certainty, when those of its cultivators who shall have labored and garnered in these fields and who shall survive, will look back in calm restrospection upon the past with mingled feelings of sadness and of triumph. We are quite convinced, however, of the futility of any attempts to reverse the current now everywhere setting so strongly in this direction; we would only give expression to opinions which we believe are similar to those entertained by some of the best men in our ranks. All of us, gynæcologists or not, must guard against looking upon our profession as one to be used in too materialistic a point of view; and in order to strengthen and support this caution we may recall with advantage the sentiment strongly uttered on a public occasion by the great Sir Benjamin Brodie: "The physician, with the poorest practice who pursues his profession as a science is superior to him who grovels before it as a trade;" or that German quatrain, quaint but simple, with reference to the exalting our profession to a science or debasing it to the mere purposes of procuring a subsistence, which has been thus rendered:

> To some she is a goddess great,
> To some a milch cow of the field,
> Their business still to calculate
> The butter she will yield!

Or Pope's deploring the absence of his friend Dr. Arbuthnot:

> "Far from his kind Arbuthnot's aid,
> Who knew his art, but not his trade."

At the recent meeting in this city of the State Medical Association and in the discussion of an excellent paper on *pessaries* by Dr. McIntosh in which moderate views were entertained, it might have been observed how after all the varied instruments—some of them more or less transcendental—were recommended to be used, nearly all the speakers hinted at some happy period "to arrive" when the present almost morbid excitement would subside and pessaries would not be "quoted" so freely.

Dr. Atlee states with reference to the *use of the speculum* in the treatment of the diseases of the uterus that as a general rule the disorders which require its employment are confined to, or at least originate during, the menstrual period of life; but that

ılypus, located just within the os, may entirely escape detec-
ɔn, until it is brought into view by means of the speculum,
hich, stretching the upper part of the vaginal tube, dilates the
, thus rendering the lower portion of the polypus visible."

We have next a statement of the diseases in which the instru-
ent is of great value, including most of the diseases of the os
ıd cervix uteri, congestion, inflammation, ulceration and hyper-
ophy of the os and cervix, etc. The following remarks are
ade with regard to the much discussed subject of "*Inflamma-
on of the Uterus*:"

"Modern pathology embraces under this single term a host of
iseases described in the works of the older authors. To pre-
ent repetition I will designate several of them as more or less
ependent upon, or intimately associated with, inflammation of
ıe uterus: ulceration, displacements, flexions, irritability, neu-
ılgia, leucorrhœa, induration, hypertrophy, dysmenorrhœa,
ıenorrhagia, amenorrhœa, abortion, sterility, chlorosis, and hys-
ɛria. The most frequent form of inflammation is that which
as been denominated *granular ulceration* of the os and cervix
teri. This term has been the subject of much debate, and it
ıs been strongly objected to as being pathologically incorrect.
do not think the objection, in all cases, tenable. If we examine
ıe uterus affected with this form of inflammation, when in a
ɔnstant state of procidentia, we can scarcely deny the existence
ulceration as defined by John Hunter, for there is both solu-
ɔn of continuity and superficial destruction of tissue. If this
erus, thus diseased, be now elevated and kept constantly within
e vagina, it will be found, in the course of time, to assume a
fferent aspect, and to partake of the characteristics of the dis-
se as usually seen in an organ that has never been exposed,
ıd resembling somewhat the ordinary granular inflammation of
e eye. Hence, if this change in the appearance of the disease
the mere result of a change in the locality of the organ, it is
ɔt a misnomer to call it ulceration; while those, who recognize
e characteristics of an ulcer which exposed to light and air,
ınnot alter its pathology by occluding it within the walls of the
ıgina. As the disease, however, is the result of inflammation,
l objections may be met by denominating it *granular inflam-
ation*, which is pathologically correct. The term granular,
ɔwever, is only a condition of the disease, and not essential to
, as in other stages of the inflammation and in other forms of
ceration, this appearance may be absent. But I find myself
gressing into a pathological question, which I had intended to
ɾoid in this paper."

Dr. Atlee believes that a prolific source of mischief arises
om *inflammation of the os and cervix* which in many ways
ffects the health and happiness of the female sex, particularly
ırough reflex influence. We are sure that a man of experience

possessing the real knowledge which he has would not permit himself to run into vicious extremes, and we therefore record here his opinion, that it is to this condition of inflammation from which spring symptoms which simulate many morbid states of the system; that it aggravates real disease in other organs and increases the obstinacy of their treatment. We give his own description:

"This is frequently the case when the cause is unsuspected, both by the patient and the physician. How often has the physician been at his wit's end in the treatment of the chronic diseases of females? How often has he wearied in his futile endeavors to relieve the complaints of a nervous patient? changing his prescriptions almost daily, and treating them, in turn, for every variety of disease, curing few or none, and finally resorting to mere nervines and placebos, concluding that the patient was merely nervous, or that the malady was imaginary. Such a patient is always complaining, and never well. She has run the round of the doctors. She has been treated for disease of the spine, of the heart, of the lungs, of the liver, of the bladder, of the kidneys, of the stomach, and for neuralgia; for she may have symptoms of them all. She has been cupped, blistered, and incessantly dosed. She has been confined to bed for months. She has had pessaries inserted and removed every month for years. She has paid large druggists' and doctors' bills; and made large expenditures of time and money in travelling, or at various summer resorts, or at sanitary institutions. And thus, year after year the same routine is gone through, and yet health does not return!

"When such a patient presents herself for treatment, I think it will be found that, in nine cases out of ten, a careful speculum examination will disclose an unsuspected disease of the uterus. And if inflammation is present, I am confident that the proper local treatment will, in a large majority of instances, do away with the necessity of all mechanical supports, and the incessant drugging, as well as relieve the protean symptoms for which these therapeutic agents had been unsuccessfully employed. It has sometimes been asserted that the proper mode of curing diseases of the uterus is to treat them by constitutional means alone. This I regard as simple nonsense. No one can doubt the value of attention to the general health, when the vital powers have been broken down by a local disease; but is it logical to infer that the health can be restored by general treatment, while neglecting the local trouble which originated and still maintains the general ill-health? Besides, those who confine themselves exclusively to that mode of treatment seldom make anything more than a tactile examination, or perhaps none at all, thus treating a disease whose diagnosis is merely conjecture, because it has not been made out by ocular proof, the only certain evi-

dence of its presence. To battle with a chimera, in this age of investigation, is too Quixotic for rational medicine. The detection of disease must necessarily precede its successful treatment. Once definitely diagnosticated, it may be properly treated. If there be a local cause disturbing the general system, remove the focus of irritation, and all the reflex anomalous symptoms will disappear. It is just as unphilosophical to attempt the cure of such disease by constitutional means as to try to arrest the present eruption of Mount Vesuvius by contending against the ashes, the scoriæ, and the lava which are projected from its crater."

In speaking of the local treatment of "granular inflammation of the os and cervix" he refers his readers for information to "the valuable works of our American authors, Thomas and Byford." Whilst regarding the common tubular speculum either cylindrical or slightly conical as the most simple, he prefers the old Ricord instrument or quadrivalve, admitting, however, that no one instrument will suit for all purposes and that any physician will get into the habit of using certain forms which answer his purpose best. A modification of Nott's is generally used here, with Sims's. Our readers will doubtless prefer to read the following in the words of our author:

"With regard to the position of the patient, every physician has his preference. Some place the patient in a supine position across a bed, with the hips near the edge, and opposite a window, using day or sunlight. Others operate with patients on their sides, their knees being drawn up. While others prefer the semiprone position, or that introduced by Dr. Sims. In the majority of cases, when treating patients at their own homes, I adopt the first method; but in my office, where I cannot avail myself of the light of a window, I place the patient in the same position on a reclining chair, and use candle light, concentrating it upon the diseased surface by means of a reflector. Sometimes it is necessary to vary the position of the patient, as well as to change the form of the speculum, in investigating and treating diseases of the uterus.

"The mode of using the speculum is a matter of some importance. There should not be the least exposure of the patient. The lower part of the body and the limbs must be protected by drawers, and when the patient is in position, a napkin must be passed under her clothes, and spread out over the thighs and pelvic region. A tactile examination should now be made, and the exact locality of the uterus ascertained. On withdrawing the hand, it should rest at the vulva, and the labia be separated by the thumb and finger; at the same time, the speculum, warmed and oiled, should be introduced gently between them, and directed toward the previously ascertained place of the os uteri, carrying it well forward until it impinges against the organ.

The ends of the napkin are now brought down between the speculum and thighs on each side, and the pudendum in this way entirely protected from exposure. A little manipulation, which practice will very much perfect, will now bring the os and cervix into the field of the instrument. The next thing is to have a good light to bear directly upon the parts exposed. At this stage of the process you may be disappointed in detecting disease, even when disease really exists. Indeed, I have met many instances of persons having been examined and pronounced free from uterine trouble, who a day or two afterward exhibited unmistakable signs of inflammation. The os, having been brought well into view, may be so coated with a tenacious opaque mucus as to obscure the diseased surface, and appear to the inexperienced eye as healthy tissue. A long speculum forceps, armed with a soft cotton rag, should now be passed through the speculum, and this mucus carefully swabbed off. When thus cleansed, the disease, if present, will become apparent, and is in a condition for any application."

Among the local agents to be used, Dr. Atlee gives the preference to the solid nitrate of silver, the destructive qualities of which he regards as very limited, though classed among the caustics, and in this we entirely agree with him—whether it be applied to the mouth, anus, or uterus. In syphilitic diseases affecting these organs, our experience is that after its caustic properties are produced, its influence is sedative, the destruction proceeds no farther, granulations spring up, and the healing process begins more readily than after the use of any other agent. It is quite surprising to see with what rapidity, for example, *plaques muceuses* and the *whitening* of the mucus membrane of the mouth and throat which, if neglected, would lead to ulceration, disappear under the local application (sometimes even one only is sufficient) of solid nitrate of silver. We are glad to see that Dr. Atlee also affirms this distinctly; he says that it is more properly a "local alterative, as it produces its happy effects more by changing the action of the part to which it is applied than by destroying its structure. Whatever may be its immediate effect, the ultimate result is antiphlogistic, sedative and recuperative." He insists, and our own hospital experience confirms his views, that "this valuable agent does not require such extreme nicety in its application." It demands *no* "*antiphlogistic contact*," nor the skillful hand of an artist to make the delicate or discriminating application, as some are feign to make us believe to be necessary. It "requires no peculiar touch to give it any magical influence. You simply pencil the diseased surface until it turns white. After that carefully swab off the excess of caustic by means of a soft cotton rag, until the surface is dried." He advises that this should be repeated at intervals of from four to ten days, according to the severity of the inflammation and the stage

of the treatment; and that the case should not be abandoned until every vestige of the disease has disappeared, although it may require two, four, six, or even twelve months to accomplish this.

We are glad to read, since writing the above that this practice is also fully supported by others, and specially by Dr. Braxton Hicks, in a recent paper (Obstetrical Journal of Great Britain, May, 1873,) on "Abrasion of the Os and Cervix Uteri." He says if this surface (the os uteri) be touched by any irritant, then the whole symptoms are aggravated; but if, on the contrary, it be covered lightly over by nitrate of silver, then, after a short time, the pains lessen, and after four or five applications, at about a week's interval, the greater part of the symptoms have subsided, both local and general." He also refers to the identical examples which our own experience had furnished, viz: to "syphilitic fissures of the tongue." "If the surgeon touch the fissure with nitrate of silver, some pain ensues, but after a short time it subsides, and in about half an hour only but a slight remnant exists of that which was so troublesome before. Similar instances may be seen in various parts of the body, take the rectum for instance."

If the granular inflammation has an indurated base, and is slow to yield to the nitrate of silver, Dr. A. makes the occasional application of the acid nitrate of mercury, nitric acid or strong carbolic acid—the nitrate of silver being continued in the intervals. Coexisting with this, the whole cervix may be hypertrophied and indurated, causing the cure to be still more protracted. In such a condition he finds that benefit will be derived from local bleedings by deep punctures in the cervix with a spear pointed lancet. In this case also he employs a concentrated solution of iodine and iodide of potassum in glycerine, painted over the exterior of the cervix, and which also is associated with the nitrate of silver. This is the formula:

R. Iodine.....
Potassii iodide.....a. a. drachm i.
Glycerine.....f. drachm ii.—m.

Should the inflammation extend into the cervical canal, assuming the form of endo-cervicitis, and, indeed, through the os internum into the cavity of the uterus itself, (as in endo-metritis,) the patient does not get well. The inflammation must be followed up into the cervix "by carrying the solid caustic well into the canal, or a small portion may be pushed home by the sound into the cavity of the uterus and left there to dissolve." In the latter case a ribbon of muslin, wet at one end with a solution of common salt, may be placed against the os uteri before removing the speculum, and allowed to remain there with the other end slight-

ly protruding from the vulva, so that the patient may remove it in an hour or two. Or, as the melted caustic flows into the vagina, it may be decomposed by syringing with a solution of common salt:

"In all cases of the application of nitrate of silver to the uterus, the vagina should be protected from its action, as by doing this the patient is saved from much suffering. The practice of applying, or rather of attempting to apply, a solution of nitrate of silver, by means of a camel's hair pencil, into the cavity of the uterus, is entirely inefficient and abortive. By persisting in the above mode of treatment, at proper intervals, the cure of this disease is most certainly accomplished, and, as a consequence of its cure, the constitutional symptoms, resulting from reflex action, generally disappear."

Neimeyer amply recognizes this *general pathological condition* of the uterus as the cause of displacement, malposition, etc., and hence he also urges the inutility of certain purely mechanical expedients.

Dr. Atlee thus records his views with regard to "Malpositions:"

"Coexisting with this inflammatory disease of the uterus there is almost universally some form of malposition of the organ:—prolapsus, version, or flexion. I am convinced by ample observation that the great majority of misplacements of the uterus are dependent upon a pathological condition of the organ, which, if relieved, will be followed by its restoration to a normal position, or, if it should not be restored to its normal position, after having been cured of the inflammation, that the misplacement will produce no serious symptoms. When we consider the small size and little weight of a healthy uterus, and the comparatively large capacity of the basin which contains it, it is unphilosophical to suppose that any serious consequences can result from changes in its position. Besides, its relative position is continually varying every twenty-four hours without any inconvenience: the constantly changing condition of the bladder and rectum, the acts of defecation and urination, of sneezing and coughing, all impulsive actions of the diaphragm and abdominal muscles, the various attitudes of the body, the drag and constrictions of dress, and other causes are operating to this effect.

Hypertrophy of the Uterus he states may be complete or partial, with or without induration, and accompanied or not by inflammation. Under this head he also embraces sub-involution. Where the induration coexists with hypertrophy, he applies every four days the glycerole of iodine and iodide of potash (see formula above) by means of a camel's hair brush, to the whole lower or vaginal portion of the uterus, as it is seen projecting into the field of the speculum. Before and after the application the parts should be cleaned off by a dry cotton rag. If inflammation also

exists, "the solid nitrate of silver should be introduced into the cervical canal at more distant intervals." He advises, also, that this treatment should be associated with external counter-irritation to the inguinal and hypogastric regions and appropriate general medication. He adds the following, in which the use of muriate of ammonia is referred to:

"A favorite prescription of mine in these cases is a combination of the fluid extract of ergot and tincture of digitalis, twenty drops of the former to ten of the latter three times a day, alternated with ten grains of the muriate of ammonia also three times a day. Under this treatment the inflammation will gradually subside, the absorbents will be excited into action, the size and weight of the uterus will diminish, its natural supports become strengthened, and the organ will gradually return to its normal position. Unless the uterus be so much enlarged as to rest upon the brim of the pelvis, we usually find it anchored, by its increased weight, low in the pelvis, or prolapsed; or, it may be retroverted or retroflexed in consequence of a local hypertrophy of its posterior wall; or, *vice versa*, anteverted or anteflexed from a similar cause destroying its equilibrium. A very common error in this, as in other forms of uterine disease, is to treat the *effect* of the disease for the disease itself, and, not looking beyond the malposition, to introduce a pessary. In some cases, a change in the position of an enlarged uterus, when supported by a pessary, will be followed by relief, but more frequently the pressure of the instrument aggravates the symptoms, while the disease itself continues. The cure of hypertrophy or any other disease of the uterus, and the several malpositions dependent on such pathological conditions, by mere mechanical arrangements, cannot rationally be expected. In the large majority of cases the uterus will be restored to its normal position without resorting to the use of the pessary, if appropriate treatment be adopted to relieve the morbid conditions, which have caused the malposition."

The above remarks, he says, apply also to the treatment of fibroid deposits of the uterus, and Dr. A. recommends very highly the employment of muriate of ammonia as a promoter of absorption. Following the hint derived from this paper, we have used it in a number of cases where this indication was required, and we have long known its value in pneumonia in combination with other agents. Dr. A. will not admit that it is impossible to change the pathological condition of uterine fibroids by medication, or to induce in them interstitial absorption. He is "quite sure that this opinion of the intractable nature of uterine fibroid, is incorrect; that their growth has been checked; that they have remained stationary for years; and that they have entirely disappeared in consequence of treatment." Whilst he does not regard this result as uniform, nor that it occurs in the majority of cases, it is sufficiently frequent to warrant the opinion that we do pos-

sess an agent which has a therapeutical influence in this morbid myomatous tissue. "This agent is murate of ammonia. Dose ten grains, three times a day." Dr. A. advises that it be employed uninterruptedly for a long time, and he says that he has persisted in its daily use for years. Its good effects are sometimes observable in a few months; at others not for one, two or three years, and again no results have followed its use. He considers it valuable and safe because in such doses it never impairs the general health. We are also inclined to put some faith in the combined use of mercurial and iodine ointment, applied externally, over the uterus and the thighs, with the internal exhibition of proto-iodide of mercury carefully given. It acts slowly, produces a deep and profound impression, and promotes slow absorption.

For the treatment of scirrhoid induration of the uterus, which is a slow process, he uses the same glycerole of iodine as advised above, applied to the hardened surface every four days, and when granular inflammation of the os and cervix coexists, applying nitrate of silver to the inflamed parts at every alternate visit or every eight days. But this is not sufficient, and constitutional remedies must be used. "The great agent in this, as in all diseases of a malignant character, is arsenic." Dr. A. prefers Fowler's solution, or the arsenite of potassa, and he believes that when in small doses, so as not to irritate the stomach or produce its specific action, and continued for an indefinite period, that it has a most powerful influence over the cancerous cachexia, "and will frequently so modify the pathological condition of the system as to prevent the deposit of the cancer cell, and in this way may extinguish the disease." *The maximum* dose used is three drops, the quantity to be regulated by its effects upon the stomach, always reducing it to an amount that will produce no gastric irritability. The arsenite of soda may be substituted as more acceptable to the stomach.

In treating of the use of the speculum in *dysmenorrhœa and sterility*, Dr. A. states that after the cure of ordinary granular inflammation of the os and cervix uteri, it not unfrequently occurs that patients who have suffered for years from painful menstruation are entirely free from pain, and that those who have been barren conceive and bear children. But he does not wish to refer to this condition under this heading. It is entirely mechanical—the causes being a contracted os, or a strictured cervical canal. He does not also include flexions and curvatures of the uterus, as these malformations usually coexist with inflammation. The mechanical causes of dysmenorrhœa, and sterility may be either congenital or accidental, and their effects are only manifested after the age of puberty. The speculum and sound will disclose this. "If contraction and stricture exist, free from inflammation, or if they should continue after inflammation has been relieved, we may know that dysmenorrhœa and sterility should result as a natural consequence."

"The treatment recommended has been the bougie, sponge tents, and section. The bougie can accomplish nothing. Sponge tents and sea-tangle will dilate the parts to any desirable extent, but when their use is abandoned, the parts again return to their original condition, and the cure is not permanent. The most speedy, satisfactory, and certain mode of treatment is section. When the speculum is in position a small concealed bistoury may be passed through the strictured portion of the cervical canal, then opened and withdrawn, cutting its way out on the side. Again it may be introduced, and the section repeated on the other side. Or, a better instrument—the double uterotome—may finish the section by one operation. Subsequent treatment is now required to prevent the re-union of these cut surfaces. This consists in using, at proper intervals, the uterine dilator for several weeks, which prevents the adhesion of the divided surfaces, and maintains the channel patulous, until the enlarged canal is entirely healed, and covered over by mucous membrane. The relief now is permanent."

When Dr. A. states in conclusion that if there be a question of morals involved that course is right and best which aims and accomplishes the greatest good to the patient, only when we feel almost if not altogether certain that the sufferer demands that course and that we are under a moral and professional obligation to adopt it, he surely means also that every guard of inviolable secrecy and professional and family reticence should guide and direct us. Whatever in our best judgment it becomes *necessary* to do should be performed only and entirely for the benefit of the patient. Everything should be wholy subordinate to the welfare of the sufferer who requires our aid; and she will thus pass from our hands, not surely as inexperienced, but as little injured in thought feeling and sentiment as it is possible for her to be before dire necessity compelled her to the unhappy alternative of continued ill health or the relief which ocular inspection and surgical aid—with all its attendant details—may enable us to afford. Under these circumstances and these alone, we need shrink from nothing which may be absolutely required to be done. F. P. P.

Art. IX.—*The Practice of Surgery.*—By Thos. Bryant, F. R. C. S., Surgeon to Guy's Hospital; with 507 Illustrations, 8vo., pp. 984. Philadelphia: Henry C. Lea, 1873.

This is a far less pretentious work than that of Mr. Erichsen's, noticed in our last issue. It is a moderate sized volume, of ninety-four chapters, and purports to be simply a "Manual of the Practice of Surgery," dealing only with "essentials and principles."

From the preface, which is short, modest and sensible, we learn that the work was undertaken only after there had been placed at the author's disposal, "the rich stores of information gathered within the walls of Guy's Hospital, in the shape of preparations, models and drawings." This certainly was a high incentive, and fully justifies the addition of another text book to the list which already illustrates English surgery. With ripe experience as surgeon of the honored and world known institution that he so creditably represents, it was Mr. Bryant's prerogative to be heard amidst the hum of progress which so decidedly characterizes modern surgery.

If there is one fact more than another that fixes our attention, after a somewhat careful survey of the work, it is the settled conviction of the writer regarding his views and doctrines. There is consequently more individuality about the book than we find in other recent treatises. We are at once convinced that the writer's views emanate from that schooling which is the offspring of calm observation and rugged experience. And yet there is no evidence of vanity or dogmatism to detract from the sympathy which we at once feel for the manly effort. The writing is often careless, and has no pretensions to scholarly finish; the efforts to condense ruin the style. As we read, it becomes apparent that the author's high aim is not fine writing, but the dissemination of correct principles and sound practice. When we resolve to pass by the imperfections of style, and the minor errors of expression, and estimate the work in its rough finish, we find it far more valuable than the polished tinsel of the closet. And without being the apologist for careless writing, or in the least disposed to depreciate high cultivation, we instinctively drop the keen blade of criticism, and, in view of the known distractions and embarrassments which surround the active hospital surgeon, seek mainly to accord the honor which is due. But, for truth's sake, we must at the onset express our disapprobation, and urge a future correction of much that pertains to the execution and general arrangement of the book. While we are treated with a large number of new illustrations, many of them taken from specimens in Guy's Museum, there are some unnecessary, others ludicrous, and we trust not correct portraitures of the actors at Guy's Hospital. The execution of the drawing and engraving is in many instances defective. The artist is evidently neither anatomist nor surgeon. Where economy of space is essential, we see no reason for introducing illustrations of no real value. Where the description of an operative procedure, for instance, is good, and where, as in our day, every student has abundant opportunity of seeing the actual operative work, and familiarizing himself with the more common instruments, why add to the cost of a book by pictures of common knives and scissors, or finished portraits of the surgeons, assistants, old women, nurses and suffering babies? Will

an operation for hare-lip be better done after looking at the bound baby, nurse and surgeon's assistant on page 234? Or to successfully perform an amputation, must the young practitioner study the attitude of each of the five respectable old gentlemen on page 943? If any illustration is needed to teach in the matter of amputating a limb, rather should there be figured a military surgeon amidst the confusion following a battle, operating by torch light or with the light from a flickering candle, and without other assistant than his hospital steward. This might tell the student or the young operator that he must learn self-reliance, and have coolness and courage under difficulties. Again, upon page 600, we have a most ludicrous picture of the Sims's position in the operation for vesico-vaginal fistula. The exhibition here of part of the buttock, the vagina and the soles of the feet, can serve no useful purpose, and is discreditable to the artist and the author of the book.

In the general arrangement of the work practical good seems to have been entirely sacrificed to fancied "convenience." It is true the chapters can be studied independently, as they stand upon their individual merit, but what possible object can there be in carrying the student abruptly from "Injuries and Diseases of the Nerves" to "Surgical Affections of the Nose?" To discuss the "Injuries and Diseases of the Veins," and pass on to "Affections of the Lips, Mouth, etc.?" After the "Surgery of the Anus and Rectum," we are introduced to "Contusions, Wounds and Sutures." "Gunshot Injuries" are treated of after some forty intervening chapters, and next in order comes the subject of "Feigned and Hysterical Disease." After "Orthopædic Surgery," "Anæsthetics" are taken up, and then "Shock and Collapse." After "Amputations" comes a chapter on "Elephantiasis and Tumors of the Umbilicus," then one on "Affections of the External Ear," although the author affirms in the preface that "the rightly recognized specialties of the eye, ear, and dental surgery have been excluded." Chapter XCIV., and last, is upon "Parasites," a subject which might certainly have been excluded from a surgical treatise.

We gladly commence a pleasanter task with an examination of the introductory chapter, which, apart from some bad writing, is excellent. *What and how to observe*, is a subject of the first and highest importance to the student. The methods for obtaining a correct opinion are well put. Clinical phenomena are given the leading place, and these are linked, whenever possible, with pathological phenomena. Practice based on principle is correct, but that founded on experience, or empiricism, is alike to be sustained. The author remarks:

"*That in the diagnosis of a case every possibility of its nature should be run over and entertained, a conclusion being arrived at by a process of elimination; each possibility being considered sepa-*

rately and weighed, the most probable should be finally accepted; a diagnosis framed on probabilities alone being most hazardous."

"*Cachexias*," in the sense in which the term is commonly used, are not believed in. "The cachexia of looking ill is attached to the subjects of varied forms of disease, malignant and simple. The subject of cancer, as the functions of life become interfered with, and his powers undermined, has only the appearance of one suffering in a similar way from any organic disease. Cachexia is a looking ill, whether from cancer or from abdominal, rectal, suppurative or syphilitic disease."

The clinical student will be greatly advantaged by a careful study of the "Points for Observation in Surgical Cases," which is a happy and novel feature in this introductory chapter. There is nothing like beginning early and beginning right with the record of observations. And now comes the importance of an experienced guide to prevent wanderings from the true path—to save time which is otherwise lost in retracing errant footsteps. We commend these "Points for Observation" also to the busy practitioner who may desire to report cases of importance met with in every day experience. Too often such reports are practically valueless to the profession, because of the faulty manner in which observations are made and recorded.

Chapter I. Treats of "Repair and Inflammation." These are truly associated processes, and by treating them together the subjects are simplified, and the student better enabled to trace up successive and consequent phenomena. The only objection that can be advanced to the plan is that it may induce the beginner to take too mechanical a view of the inflammatory phenomena, and to apply the primary changes which follow a solution of continuity of tissue to the subsequent solution of all that occurs in inflammations not of traumatic origin.

Our author, like Mr. Erichsen, still teaches the "*immediate union*" of wounds—healing by simple adhesion of surfaces, without inflammation, and without a scar. We have already insisted, in our review of Mr. E.'s book, that there must be a coalescing material in order for fusion of opposing surfaces to result. The process has been likened to that softening which takes place when a piece of wax or rubber is heated preparatory to contact for secure union. This change in the tissues, preparatory to union, is so analagous or identical with the early changes of inflammation that we recognize, in the completed process, simply the "*adhesive inflammation*," or "*union by first intention*" of Hunter.

At the end of this chapter we have furnished the new test for pus, of Dr. Day, of Geelong:

"He prepares his test-fluid by exposing a saturated alcoholic solution of guaiacum to the air until it has absorbed a sufficient quantity of oxygen to give it the property of turning green when placed in contact with iodide of potassium. On moistening the

most minute quantity of pus with water, and pouring a drop or two of the test-fluid over it, a clear blue color is produced."

Chapter II. On "Traumatic Fevers, Septicæmia and Pyæmia," is a good condensation from the best authorities of all that we at present know in regard to these subjects of daily increasing interest.

In Chapter V., "Contusions and Wounds of the Scalp" are discussed. The general belief that scalp wounds are frequently the exciting cause of erysipelas, is not sustained by the experience at Guy's Hospital. Of one hundred and seventy-five cases of severe scalp wounds admitted in eight years, "erysipelas followed only in three." When there is any difficulty in adjusting these wounds, sutures are "fearlessly applied, as to other parts," and they constitute really the best dressing, permitting the timely use of water-dressing. The valuable caution is given not to include within the suture the aponeurosis of the occipito-frontalis muscle, lest mischief be set up in the cellular tissue beneath this structure. This kind of suture is considered unimportant, but "all sutures should be removed on the second day." We think this rather early, but in the event of a proposed removal of the sutures within three or four days, we give preference to the carbolized, or well waxed, silk material, as being easier of application and more readily extracted than wire.

In regard to the interesting, and in some respects still unsettled question of the use of the trephine in head cases, we copy the following, as we think, sound conclusions furnished by way of summary:

"1. In *diffused injuries* to the cranium and its contents all operative interference is unjustifiable, as it can only be of use in local conditions.

"In *local injuries* to the skull the question of operation may be entertained.

"2. In *simple fractures*, with or without depression, and in *compound fractures that are not comminuted*, with or without depression, operative interference is only called for when marked and persistent symptoms of local compression of the brain exist.

"3. In *compound comminuted* fractures, with or without brain symptoms, depressed bone should be elevated and fragments removed, with the object of taking away known sources of irritation to the membranes and common causes of encephalitis.

"4. In all cases of *local injury* to the cranium, of fracture or other injury, followed by clear clinical evidence of local inflammation of the bone, and persistent symptoms of brain irritation or subosteal suppuration, the operation of trephining should be undertaken."

Passing to Chapter XX., the first of those pertaining to the surgery of the respiratory system, we gladly note the positive opinion and belief as to the value of the Galvano-cautery in Lupus

Exedeus affecting the Nose. The worst case ever seen by the author, and which had existed for years, was cured in a month by one application of the above named means. This form of cantery is regarded as superior to all others in common use.

When dealing with the Surgery of the Chest, in Chapter XXI., the author expresses himself at length in regard to the advantages of blood-letting. We will let him speak for himself upon the efficacy of this means, now considered of such doubtful advantage. He is treating of lung laceration in connection with fractures of the ribs:

"Bleeding is now rarely performed; indeed, I believe that at Guy's Hospital it is rarer than any capital operation. In these cases of lacerated lung, however, when urgent dyspnœa makes its appearance, and the powers of the patient do not forbid it, I know of nothing which affords equal benefit, and which to the patient gives greater relief or to the practitioner greater pleasure. Bleed with no sparing hand; let the blood flow freely in a full stream, and as it flows the symptoms will gradually disappear. When relief has been obtained, immediately arrest the flow. Your aim has been to make an impression through the systemic circulation upon the pulmonary, and syncope can only do harm. Watch your patient carefully, and repeat the operation if the symptoms should return, and, if necessary, repeat it a third time. The antimonial treatment, however, must not be neglected. The bleeding is really to relieve immediate symptoms, and to give time for the antimony to take effect; when the patient has been brought fully under its influence, the danger may be said to have disappeared, as few patients die from secondary inflammation of the lungs when once fairly under the influence of antimony."

We now come to the Surgery of the Circulatory System. Chapter XXIII. is taken up with "Wounds of the Heart and Arteries, Hemorrhage and its Treatment." Subsequent chapters treat of "Diseases of the Arteries," "Ligature of the Arteries," "Injuries and Diseases of the Veins," etc. All of these matters are carefully and succinctly handled. As Guy's has been long the experimental field for *Torsion* in connection with the arrest of hemorrhage, we turn with much interest to Mr. B.'s views upon this subject. Again we will let him speak for himself:

"The physiological arguments in favor of torsion are very great, and the practical advantages seem to be no less; for after three years experience of the practice applied to vessels of all sizes, the femoral being the largest, I have had no mishap. Wounds have united more rapidly and kindly. Primary union being the rule, there has been less constitutional disturbance after operation, and consequently less liability to traumatic fever, pyæmia, and other complications, such as we are all too familiar with in the practice of surgery. I have had stumps heal in a week, and patients up in two weeks, without one single draw-

back; rapid and uninterrupted convalescence following the operation. In other cases equally good success can be recorded."

There seems to be no apprehension of the twisted end of the vessel acting as a foreign body, as was the fear of Mr. Erichsen.

Mr. Bryant thinks favorably of the principle of the antiseptic ligature, and hopes that success will yet come from this direction. He however believes that "a true antiseptic ligature by which a vessel can be secured without the introduction of any permanent cause of irritation is not yet in existence."

He expresses his dissent from the belief of numerous authors as to atheroma of an artery being followed by aneurismal disease, and affirms that inflammatory changes constitute a more determinate cause.

The compression treatment of aneurism is most enthusiastically described and approved of. The Dublin surgeons are quoted in full. Digital compression is thought the best and quickest plan when well applied. Three good men are necessary, and pressure must be maintained for five hours consecutively; it must be only sufficient to arrest the flow through the vessel; each man in rotation applies pressure for ten minutes. The best mode of applying instrumental pressure is by "a conical weight of lead, covered with leather, and perforated with an iron axle, upon which extra pieces of lead can be dropped." This weight is slung over the limb, and can be shifted from one spot to another.

The distal ligature of Brasdor or Wardrop is considered justifiable in innominate aneurism. In one case, alluded to in our late review of Erichsen, Mr. B. applied a catgut ligature to the subclavian, and "a good recovery ensued." In carotid aneurism the distal ligature can be more confidently used.

The directions for the ligation of special vessels are clear and practical In the operation upon the femoral in the middle of the thigh, the greatest misfortune, as is well known, is wounding the femoral vein. In regard to this our author quotes Holmes, and gives the following practical direction:

"Should the vein be wounded by the needle, the artery must not be tied at the point corresponding to the wound, but about an inch higher or lower, for 'the thread would be left in the vein to act as a seton, and phlebitis could hardly fail to ensue, and would most likely prove fatal.'"

Wounded veins are dealt with on the same general principles as wounded arteries. When necessary the ligature may be fearlessly employed; the dread of phlebitis under these circumstances "is based on prejudice, and not on practice."

Chapter XXXI. introduces the subject of diseases of the abdomen, which is skillfully handled. We cannot, however, entirely agree with some of the views expressed, and are inclined to doubt the correctness and sufficiency of the following opinions and advice:

"In all penetrating wounds of the abdomen in which any evidence of wounded viscera exists, the *local wound should be left open*, or covered only with a loose covering; for to so close the wound as to prevent the escape of the contents of the wounded viscus externally would be to close the only gate through which return to health is possible."

But unless the wounded viscus is retained at the external wound by suture, which is Mr. B.'s advice upon a previous page, in cases where the wound involves nearly the whole calibre of the bowel, there can be no reasonable assurance of the exit of the escaped visceral contents, and upon this escape safety absolutely depends. If the wounded viscus is not in situ, then in view of the almost inevitable death of the sufferer, we incline to adopt the opinion of Legonest, and advise the resort to a free exploratory incision. Safety must come either through enterorrhaphy or an artificial anus. Surgeons must acquire the courage to give the patient the little chance that operative interference alone affords.

According to our author the abdominal wound "should never be enlarged to allow of the return of omentum." When this structure has been extruded for some time, and is congested from incarceration or strangulation, when it has become inflamed or perhaps sloughing, it is as well to leave the mass alone, at least it is not wise to make any attempt at its reduction. Not until two weeks after its protrusion, and when granulation has begun, does he venture to "ligature the whole in halves."

The subject of "Hernia" receives full attention. Contrary to the general belief, it is affirmed that females are "as liable to inguinal hernia as they are to femoral, the inguinal being most common in early life, from the canal of Nack being open; the femoral in middle and old age." Femoral hernia, "before menstruation, is almost unknown; Kingdon gives only four such cases." *Taxis*, the most important matter connected with the treatment of strangulated hernia, is remarkably well described, and the rules as to its application are thoroughly sound. We quote the following as expressive of the intimate relation between the taxis and the operation for relief of the strangulation, as well as to show the forcible manner in which the author puts the question:

"The reduction of a hernia by *gentle* taxis with a patient under chloroform is a simple, rapid, and successful operation. The reduction of a hernia by *forcible* or prolonged taxis without chloroform is a dangerous and far less successful proceeding. In femoral hernia, indeed, herniotomy had far better be employed. Under chloroform the taxis is almost always successful in inguinal hernia.

"When the taxis has failed, nothing but an immediate operation is justifiable. The operation is not of itself dangerous, al-

though the condition that demands it is exceedingly so. It is not, and should not be, regarded as a last resource; in many cases it should be the first resource. When a patient is hanging, the first thing any one does is to cut the rope that is causing strangulation; no other means are admissible. When a piece of bowel is strangulated, the strangulating medium requires division to give it freedom; the doing of this adds nothing to the danger of the case. The danger lies in the strangulation, and this increases every minute."

Preparatory to the operation, and as an adjuvant of the *taxis*, the *aspirator* seems destined to serve a useful purpose. Mr. B. does not allude to its use. He however seems to have anticipated, and to fully appreciate the principle of the employment of the instrument. In a previous chapter, when alluding to tapping the intestines in cases of intestinal obstruction, he records a case of "ileo-colic scrotal hernia," in which he punctured the intestine with a trocar in four or five places before he could effect the reduction. "A rapid recovery took place without a drop of suppuration."

The opening of the sack in all cases of herniotomy is warmly condemned. "The question of opening or not opening the sack resolves itself into the necessities of the individual case. The 'minor operation' is infinitely preferable where reduction can be effected with this; where it cannot be effected, the 'major operation' must be performed." The statistics of Guy's Hospital show twenty per cent. in favor of the minor operation; but it is admitted that the cases where sack was not opened were of the more favorable kind. The argument of the author upon this interesting question is worthy of the perusal of every surgeon; we regret that our space will not permit of our giving it in full.

The opinion of Aston Key, as expressed in 1849, that "in all conditions of the intestines the abdomen is their right place," is warmly endorsed by Mr. B. He disagrees with Mr. Hutchinson, Dr. Girard, and others, that a bowel "found in bad condition should be left in the sack." Peritonitis is not the result of the return of the bowel under these circumstances. Notwithstanding that the surgeon is not sure of the condition of the strangulated bowel, cannot say "it is probably dead or going to die, the abdominal cavity is still its best place, when it can be returned." "When omentum is diseased, or in large quantities, it should be ligatured in two or more portions, and cut off. Simply to cut off the omentum and tie or twist the vessel is risky." Fatal hemorrhage from vessels not tied, and not bleeding at the time, has often been known to occur after this latter practice. After operation, "*inactivity of the bowels should be encouraged, and not thwarted by irritating purgatives.*"

Mr. B. is not an advocate for operations for the radical cure of hernia, where the hernia can be kept up by a truss, and trusses

can be had. All that can be claimed for such operation is the less liability to the descent of the hernia, and this is not enough to warrant the ordinary risk to the life of the patient. Some very judicious directions are given for the selection of a truss for the several forms of hernia.

"Surgery of the Anus and Rectum." A metallic wire, heated by the galvanic current, is recommended as a good substitute for the cutting operation in cases of "*fistula in ano*," where the patient is a "bleeder," or will not consent to the use of the knife. An india rubber ligature is also another useful means in the same cases.

For the removal of hemorrhoids the cautery, either galvanic or actual, is considered the preferable means. Mr. B. has not used the ligature, except in exceptional cases, for ten years. The eschar, after the galvanic cautery, he thinks is more solid and firm than after the actual cautery. Probably no surgeon will disparage the ultimate result of operations for hemorrhoids with the one cautery or the other; but the greater facility in the use of the ligature will, we imagine, not permit of its being superseded.

Under the section "Injuries and Diseases of the Integument," we have an interesting chapter upon "Skin Grafting." Mr. B. highly estimates the process, and gives strong illustrations of its value. A healthy granulating surface is necessary to success, and very minute portions of skin, removed with a scissors made for the purpose, so as to give no pain and draw no blood, are transplanted in preference to large pieces. The process of repair that follows is a double one; the grafts act as a stimulus to the healing action in the margin of the sore, and also grow by proliferation of their own cells. This latter result is clearly proved by the grafting of black skin upon white. Interesting examples of this are furnished. We commend the following to some of the modern philanthropic politicians of our Southern country:

"In the case where black skin was transplanted, I did it with the full concurrence of both patients; indeed, both were rather disappointed that the operation could not be repeated. They were firm friends, and the link I formed bound them closer."

The chapters on "Stone in the Bladder, Lithotomy and Lithotrity," are carefully prepared, and contain all that is of practical importance in connection with these subjects. Mr. B. quotes largely from Aston Key, the former eminent surgeon of Guy's Hospital, for whom he has justly a high admiration. Extracts from Key's writings, thirty-four years ago, as is remarked, "might have been from the pen of a more recent writer." Lithotrity was then called the "new operation." The following may be reasonably accepted as the present correct view in regard to the choice of the two operations:

"It would thus appear that in *children* lithotomy ought to be

the rule, lithotrity the exception. In *adults*, lithotrity ought to be the rule and lithotomy the exception, the latter operation being selected only when the former is impossible from some urethral or prostatic irritability or mechanical obstruction, severe bladder disease, or a large stone. Renal disease in all cases renders doubtful the prognosis of any operative procedure, the weight of evidence tending in favor of a cutting rather than a crushing operation under such circumstances, although when the stone is small lithotrity is not precluded."

In the treatment of stone in women, urethral dilatation or lithotrity suffices in most cases. In regard to the dilatation, however, this "must be done quickly; any slow dilatation is almost certain to be followed by incontinence." Calculi of an inch diameter can be readily removed in this way, under chloroform. Mr. B. uses Weiss' three-pronged dilator for the purpose. Now that sponge and seatangle tents are put to so many uses, we are curious to know the proper estimate to be put upon their action as dilators of the female urethra. Would the dilating force exerted in this way be considered rapid or slow? And would incontinence be risked by this mode of dilatation?

Chapter LIV. treats of "Stricture of the Urethra." Preference, as a rule, is given to "gradual dilatation." The method known as the "continuous," which is fully accomplished, with catheters of gradually increasing calibre, in about ten days, is considered the best; next to this, in exceptional and less severe cases, or where rest cannot be obtained, the usual "interrupted" method, effected by passing instruments of increasing size every second or third day. The "immediate" treatment, by the divulsing instruments of Holt and others is not regarded entirely safe, and is thought to be adapted only to "narrow, ring or annular subpubic or penile strictures." Internal urethrotomy, except for strictures at the orifice, or within the penis, is not considered by our author an operation for which much can be said. We venture to suggest that this opinion is not founded upon an extensive trial of the operation. For indurated or tunnel strictures of long standing we estimate the internal division most highly; nor is the subpubic location of the contraction any barrier to a successful division with the instruments of the present day. Mr. B. affirms that "where a stricture is permeable, urethrotomy is not called for." From this doctrine we feel compelled to dissent.

In external urethrotomy for impermeable stricture, Mr. Cock's mode of "tapping the urethra at the apex of the prostate, unassisted by a guide staff," is highly praised, indeed pronounced "the only form of perineal section that ought to be performed in an impervious urethra." We have no doubt that in the hands of its originator this operation merits the full praise bestowed. But the difficulty with most operators of moderate skill and ex-

perience will lie in the first essential as laid down by Mr. Cock, viz, to determine the "relative position of his finger, the apex of the prostrate gland, and the point of his knife." The "steady but bold plunge of the knife," even after the above comfortable assurance, is not without danger. The calculation is too nice for numerous very good surgeons, and we insist that the procedure is not as safe and as unerring as the procedure of Arnott or Jameson, in which, after the button-hole incision, the stricture is divided by careful incisions from before backwards. When a cathether has to be retained in the bladder, after this operation, or under other circumstances, the suggestion to cap the end with a piece of rubber tubing, as a substitute for the ordinary plug, is ingenious and valuable.

When puncture of the bladder becomes necessary, Mr. B. prefers, in common with most modern surgeons, the operation by the rectum, modified to some slight extent by the use of the peculiar trocar and canular of Mr. Cock. This is larger, and has less curve than the instrument in common use. Mr. Cock considers his modified plan "easy of accomplishment and without danger." The experience at Guy's shows a record of twenty successful cases of puncture, rendered necessary from simple organic stricture. From the carelessness of a house surgeon, a fatal case once resulted from the perforation of a coil of intestine. As no mention is here made of the aspirator, we are left ignorant of Mr. B.'s opinion of the supra-pubic puncture, which has now been so successfully used in this connection by many operators.

Chapter LVIII. is an excellent *resumé* of the diseases of the testicle. The "Table of Diagnosis of Chronic Disease of the Testicles" is specially valuable. At a glance we have all that is valuable to enable us to differentiate—Hydrocele, Hæmatocele, Chronic Orchitis, Syphilitic Orchitis, Tubercular, Cystic, Adenoid, and Carcinomatous disease of the organ.

Chapter LXIII. furnishes us with all the most important facts connected with syphilis. We stop only to notice that Mr. B. considers the mercurial suppository the best mode of administering the metal in this disease. Next to this he prefers the calomel vapor bath.

Now follows the important chapter on "Tumors." Modern investigation and progress is here better exemplified than in many other English works upon surgery. The views of Virchow are generally accepted. The classification, for practical purposes, is however made clinical rather than anatomical. The anatomical characters of the morbid growths are given "only in that they illustrate the practical. The time is to come when pathological science shall have so far advanced as to allow of an anatomical classification of tumors being made that will dovetail in fully with that founded on clinical observation." We cannot

here omit the opportunity of congratulating our author upon the comfortable feeling he, with many other surgeons, must enjoy when he can thus express himself in regard to the heretofore great opprobrium of surgery:

"Cancer appears to be in its origin a local disease, and to become general by dissemination of its elements—dissemination at first radiating from its local source and at a later period becoming general through the fluids of the body. Moore, in his work on 'The Antecedents of Cancer,' and De Morgan more recently, have, I think, established this fact. From a clinical point of view, this is, without doubt, of very practical significance, for surgeons now admit that the earlier a cancerous tumor is removed the better are the prospects of a cure or of a long immunity from the disease."

In Chapter LXVI., on "Diseases of the Breast," allusion is made to the well known differences of opinion as to the opening of a mammary abscess. Our author takes middle, and, we believe, safeground. He advises a postponement of puncture until decided pointing occurs, and then makes an incision "in a line radiating from the nipple of the patient." To determine the fluctuating and pointing, the eye is trusted to rather than the finger, and thus painful and injurious manipulation is avoided.

The subject of "Diseases and Injuries of the Bones" is well illustrated, as we might expect from the abundant material afforded by Guy's Museum.

"Fractures" receive full attention. As with most moderns, Mr. B. thinks well of the plaster bandage, particularly the Bavarian form of it. In the treatment of fractures of the thigh in children, where it is so difficult to guard against filthiness, occasioned by contact of urine and fæces, with the various dressings, it is suggested to make *vertical* extension, after the lower limb is flexed at right angles to the pelvis, and fixed by some light splint. The foot is hoisted upwards to a hook or bar above the bed, and the weight of the body acts as the counter-extending force. Cleanliness can then be ensured.

In fracture of the lower end of the radius Gordon's splint is said to have found favor with the profession. Mr. B. does not favor the pistol shaped splint of Nélaton. Where the fracture is impacted, and the fragments are allowed to remain fixed, it is useless; where the fragments are brought into apposition by proper extension and manipulation, the pistol splint is not wanted, indeed it is thought injurious. Mr. B. employs one "well padded broad anterior splint reaching to the fingers, with a dorsal splint." Extra padding is adapted to meet the requirements of individual cases. With these views we in the main accord. We have long since discarded the pistol splint, as also the Bond splint, used in our country, *et id omne genus.* Where deformity results from impaction with rotation of the lower or

small fragment, it is often best, as Mr. B. says, in the old to follow Velpeau's advice, and leave the parts alone. Then splints may be dispensed with, or pieces of light pasteboard simply moulded to the hand and wrist. Where there is no impaction, or where this exists in young persons, the secret of success is not in the splints, *but in the proper efforts for securing apposition.* The deformity must be corrected if possible by careful and diligent manipulation under chloroform. The battle is thus won, and then the ordinary straight well padded splint answer very well. Absolute rest for a certain time is very necessary, and we can secure this and render the patient quite comfortable by dispensing with wooden splints, and moulding a plaster dressing, after the Bavarian or the Neudorfer method, to the dorsal and lateral portions of the hand, wrist and forearm. A strip or two of wire gauze may be put between the layers of flannel used for holding the plaster. The hand is fixed in easy flexion and adduction prior to adjusting the flannel and the plaster paste.

Chapter LXI. treats of "Ovarian Disease and Ovariotomy." Our author has perhaps had a larger experience and given more attention to this subject than most general surgeons of his age. In 1867 he published a work upon Ovariotomy. His experience as an operator counts up sixty cases, and induces him to regard the operation in a very favorable light. Success can be counted upon "in two out of three cases, good, bad and indifferent; and in at least three out of four selected cases." To British surgeons Mr. B. accords the honor of "having established ovariotomy, in spite of blind opposition, as a legitimate operation, and one as justifiable as any other grave operation. The name of our countryman, McDowell, is associated with the honored surgeons who were the earliest practical promoters of the operation. It should have been clearly and unhesitatingly alluded to as that of the first great ovariotomist.

The important matter of the treatment of the "*pedicle,*" by the more distinguished of the modern operators, receives minute consideration. We notice that Atlee, of our country, is erroneously reported as employing the *écraseur*, instead of the clamp. In regard to the best mode of dealing with the pedicle, Mr. B. is, we think, as evidenced by the following remarks, as near a correct conclusion as any one who has written upon the subject:

"It would appear, as far as present experience has gone, that in long pedicles the best practice is to fix them externally by means of a clamp; in short and broad pedicles, in which the vessels are usually small, the cautery may be employed, or the pedicle ligatured in two or more parts with carbolized catgut, the ends of the ligatures cut off and dropped in, and the wound afterwards closed."

It will be noticed that there is no mention of the proposed American plan of "*enucleation*" which now is in much favor.

And when the question of hemorrhage is considered, in connection with the disposition to be made of the pedicle, Mr. B. evidently goes back upon his favorite and safe method of *torsion*, so conspicuously the fashion at Guy's. He now remarks: "Let no risk be run; let the ligatures be applied and their ends cut off, rather than incur any chance of bleeding." The necessity of exempting the abdominal cavity from a foreign body does not seem to him as imperative as the excluding one from a stump; and the fact that torsion entails more risk from hemorrhage than the ligature, seems to be conceded.

Our limits will not permit us to follow Mr. B. further. We can only remark, in conclusion, that we regard his production as a very creditable one, and as useful as a text book as any of the late surgical treatises with which we are acquainted. Students may safely accept its doctrines and practice, and the surgical practitioner in the absence of more exhaustive treatises occupying the entire range of surgery, may consult its pages with every probability of arriving at conclusions consistent with modern progress.

QUARTERLY SUMMARY.

Abstracts, Translations, etc., from Foreign and Domestic Journals.

MATERIA MEDICA, GENERAL THERAPEUTICS AND PHARMACY.

Hypodermic Use of Ergotin in Hemorrhage.—Mix half a drachm of ergotin with one drachm of water, and inject eight drops of the solution. The process may be repeated in half an hour or later if required. The only objection to it is the local irritation, which is sometimes unavoidable.—Pacific Medical and Surgical Journal.

Hydrochlorate of Ammonia.—The favorable mention made of the muriate of ammonia, by Drs. ATLEE, and others, and its reputed value in pneumonia, induce us to condense the following from a paper by Dr. K. P. Moore, of Knoxville, Ga., read before the Georgia Medical Association, 1873, and published in Atlanta Medical and Surgical Journal, July, 1873.—[EDS.

Acting primarily upon the alimentary canal, it is said secondarily to act as "a stimulating alterative upon the capillary, glandular and lymphatic systems, etc., on the mucous, serous and fibrous tissues, the nutrition of which it is supposed to improve."

It is also a very powerful defibrinating agent, and perhaps the most powerful resolvent in the whole materia medica. Dr. Moore, following the suggestions of Dr. H. V. Miller, prescribed it in no less than one hundred cases of whooping cough, and is fully convinced that it is a highly valuable remedy. If commenced in time, the cases usually terminated in two weeks. This combination was used: ℞.—Ammonia mur. ʒ ss., tinct. opii. camph. ʒ ii., syr. scillæ ʒ iij., aqua ʒ iv.. Teaspoonful *pro re nata*, regulated according to age, though it may be given *ad libitum*. He has also found it very beneficial in *amenorrhœa and sterility*, possessing, he thinks, some peculiar specific action in stimulating healthy ovulation and its concomitant menstruation. He gives examples of conception having taken place under its use in those who had been previously apparently sterile. He has found it highly servicable in diminishing the size of enlarged glands, liver, spleen, etc. He, also, with Dr. Aran, of Paris, uses it in intermittent fevers, combined or aided by quinine. Also in valvular heart disease, accompanied by fibrinous deposits, in hemicrania, etc., giving twenty to twenty-five grains thrice a day, combined with digitalis.

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Picric Acid as a Test for Albumen.—M. Galippe recommends, as an extremely sensitive and thoroughly reliable test for albumen, a saturated solution of picric acid. In normal urine, this solution never causes precipitation, while the most minute traces of albumen are readily detected by it. The *modus operandi* of applying the test is as follows: A drachm or two of the picric acid solution is put into a test-tube, and a few drops of the fluid to be tested are allowed to fall into the solution. If albumen is present, it traces a characteristic white line through the testing solution.—Archives of Scientific and Practical Medicine.

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Artificial Fibrine as a Diet.—Dr. John Goodman, in a communication to the British Medical Journal, says of artificial fibrine: As a member of the British Medical Association, and in the common interests of humanity, I have much pleasure in calling attention to my discovery of this new dietetic substance. So far as I have employed it, it promises fair to be invaluable in medical practice, especially in cases of feeble alimentation and deficient nutrition, and second to none in those cases where rejection of food forms a prominent feature, or where the appetite and digestive powers are reduced to a minimum. As fibrinous material, it is of course highly nutritious, and eminently adapted to all cases where there is a deficiency of fibrine in the blood. It is, perhaps, unparalleled in its qualities of lightness and digestibility, and is, moreover, a great delicacy. In many urgent cases of rejection of food, etc., it not only remains where an egg otherwise cooked would not be tolerated, but its presence in the stomach

has been found to create a feeling of want rather than of superfluity, and to promote rather than decrease the appetite for food.

The production of this substance is within the reach of every sick room, and is effected with great facility. It is formed by exposing albuminous material to the operation or influence of cold water, for a given period; and on account of its great plenteousness we employ the ordinary hen's egg for its production. When the shell is broken and removed, and its contents are immersed in cold water for twelve hours or so, they are found to undergo a chemico-molecular change, and to become solid and insoluble. This change is indicated by the assumption by the transparent white of the egg of an opaque and snowy white appearance, which far surpasses that of an ordinary boiled egg. The product, and the fluid in which it is immersed, must now be submitted to the action of heat to the boiling-point, when the fibrine will be ready for use.

MEDICAL PATHOLOGY, THERAPEUTICS AND PRACTICAL MEDICINE.

A Cure for Diabetes Mellitus.—Professors CANTANI and PRIMAVERA, of Naples, report the most extraordinary success in their treatment of this obstinate disease. The cure consists in an exclusive meat diet, and by this term fish is also excluded; further, at each meal is to be taken lactic acid ♃ ij–iv. in water ℥ vj. As a substitute for wine at dinner, alcohol ℥ ss. with water ℥ vj. is given.

Alcohol and lactic acid are designed to replace the saccharine and starchy elements of the food. To obtain a permanent cure it is necessary to persist in the treatment for several months after sugar has ceased in the urine. Then the patient may gradually return to a mixed diet.—Allgemein Medical Central Zeitung.

The Treatment of Cholera.—Dr. FERGUS, of Glasgow, gives the following rules, which are commended by high medical authorities:

Avoid all depressing passions and exhaustion of nerve-force; avoid brandy, or other stimulants, as they are not preventives; make no change in the usual diet, if that is simple, digestible and nutritious. Avoid excessive fatigue; if over-heated, beware of chill, but see that the skin is kept comfortably warm; should the slightest diarrhœa occur, the patient should *lie down immediately*, and if chilly, have bottles of hot water placed to the feet and legs, also take thirty drops of laudanum, and if a physician is not at hand, the following recipe may be used: Oil anise, oil cajeput, āā ℥ ss., ether sulph. ℥ ss., liquor acid halleri (which consists of one part of concentrated sulphuric acid to three parts of rectified

spirits) ℥ ss., tinct. cinnamon ℥ ii. Give ten drops every fifteen minutes, in a tablespoonful of water. The opiate may be given with this *once or twice*, but not more. The patient should remain in bed two or three days after the diarrhœa has ceased: ice to dissolve in the mouth to relieve the thirst; no food for a few hours, then the lightest kinds. This is strictly for the first stage; should the case go into the second stage, the particular treatment must be dictated by the physician at the bedside. We have no specific for the disease, neither can the poison be eliminated from the blood, more than small-pox or measles; to sustain the vital power while the poison is expended is the most successful plan. Remedies which are acid rather than alkaline, or neutral reaction, have been most beneficial, says Aitkin.

Quinine by the Rectum.—"Quinine will do its work just as well when mixed with cocoa butter and pushed into the rectum, as when taken by the mouth. This can be done with less trouble and discomfort than attends the swallowing of a sugar-coated pill. The doctor, patient and attendants who have once tried this method of giving quinine to children and fastidious people will be sure to remember and practice in similar cases. There is no way equal to this for administering narcotics when the stomach is weak or the patient unwilling to take medicine per mouth."—Detroit Review.

Ulcerative Stomattis.—Dr. Fordyce Barker says: "In the treatment of this affection, for a few years past, I have mainly relied upon the sulphites, either of magnesia or of soda, and I have cured my cases more rapidly than I formerly did, when I depended upon the chlorate of potassa, borate of soda, etc."—Southern Medical Record.

Isnard on the Treatment of Constipation by Arsenic.—Dr. Isnard (Marseille Medical, 1872,) states that many other physicians besides himself have observed that arsenic excites the appetite and improves the digestion, and facilitates the action of the bowels, but he is not aware that it has been methodically applied for the relief of constipation. Besides (1) improving the appetite, it (2) excites the muscular action of the intestines, and (3) it augments the secretions of the alimentary mucous membrane. It is particularly useful in the constipation of debilitated and anæmic females, sedentary persons, and old people. He administers arsenious acid in the dose of six to ten milligrammes, twice or thrice a day, with food. Sometimes smaller doses suffice. It may be used steadily for some time.—Philadelphia Medical Times.

Subcutaneous Injection.—Dr. Constantin Paul recommends glycerine as a dissolvent for subcutaneous injections. He con-

siders it to be far superior to water, alcohol, etc.; it is neutral, can be kept easily, and is, of all liquids, the one which approaches the nearest to the composition of subcutaneous cellular tissue. Glycerine is, indeed, almost a normal substance for cellulo-adipose tissues.—Lancet, August 2, 1873.

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A New Test to Prove the Presence of Actual Death.—By Hugo Magnus, M. D.—[Canada Medical and Surgical Journal, November, 1872.]—"If a limb of the body—a finger is best for the purpose—be constricted by a strong ligature, quite tightly, there will, if the subject be yet alive, be seen a reddening of the constricted member. First the part in question becomes red, and then the red color becomes darker and darker and deeper in hue, till it is finally converted into a bluish-red, the whole limb being, from its tip to the ligature which encircles it, of a uniform color, except that at the region immediately round the ligature itself there is to be seen a narrow ring which is not bluish-red but white."

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To Avert Bed Sores.—Sir James Paget, in a recent clinical lecture, recommends as the best application for this purpose a solution of one part of nitrous ether in three of water. The back to be frequently washed with this.

SURGERY.

New Means of Dilatation in Stricture of the Urethra.—It simply consists in the employment of a column of liquid about twenty metres high, established by means of a funnel, and containing about a pound and a half of water (boiled at twenty-five or twenty-seven degrees C.), and suspended above the patient's bed. An India-rubber tube (about two metres long), and provided with a cock in the middle of its length (so as to moderate or suspend the current of water), and having, at its end, a small glass pipe like an ordinary syringe, which is to be introduced into the meatus urinarus, connects the apparatus with the penis. The glass end being introduced, the cock is more or less opened at will, and slight pressure is exerted on the glass, to prevent the water from running outside. The water in the funnel is then forced down by its own weight, and runs down drop by drop, dilating the stricture without pain, and, through its local and antiphlogistic action, rendering the urethra pervious to sounds and bougies. The patient can, himself, apply the apparatus three or four times a day, and when it is removed the surgeon has only to make use of his sounds or bougies.—Lancet, August 2, 1873, from Mouvement Mèdical.

A New Écraseur.—Professor DITTEL is at present making some experiments with a new and original kind of ligature which he applies to the removal of tumors and operations for fistula ani. The material employed is rubber, such as is commonly used by surgeons for drainage tubes. The tumors to which this method is especially applicable are those of the female breast and angiomas. In operating, the tumor should first of all be well circumscribed, in order that the ligature may be well applied; the rubber, having been moderately extended, is then applied around the base of the tumor, firmly tied, and left to itself. The ligature, by virtue of its elasticity, exerts a continuous pressure upon the arteries which bring nourishment to the tumor, thus causing it to atrophy, and finally severing it from its attachment. The surface that is left is covered with healthy granulation, and there is no discharge. When the ligature has cut through the base, and the tumor has fallen off, the ligature is found in the shape of a ring, lying on a smooth surface of healthy granulations. If it should be found difficult to isolate the tumor, an artificial base can be made by transfixing the tumor with needles, and applying the ligature below them.

Dittel, while giving the preference in most cases to the knife, claims several advantages for this plan, which are not possessed by the *écraseur* of Chassaignac, or the galvanic cautery. Among these advantages may be mentioned the very small amount of hemorrhage, as well as pain, the very small discharge which accompanies the process of separation, the cleanliness of the wound left behind, and, last of all, the cheapness of the tube.

In the case of fistula, the ligature will have cut its way through in from eight to fourteen days, and is found by the patient in his bed in the form of a ring.—Letter from Vienna in the Irish Hospital Gazette.—Boston Medical Journal, August, 1873.

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Instant Arrest of Epistaxis.—Dr. MARIN, of Geneva, states in the Journal de Med. et de Chirurg. Practique, May, 1872, that, as bleeding in epistaxis generally flows from only one nostril, and most frequently from the anterior third of one of the nasal fossæ, he was led to believe that, by compressing the corresponding facial artery on the superior maxillary bone, near the ala of the nose, the afflux of blood would be diminished, and the hemorrhages at once be arrested. He has tried the plan in very many serious hemorrhages from the nose, and the expedient has proved perfectly and promptly successful.—L'Union Medicale.

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Removal of Plaster of Paris Bandage.—A strong solution of common salt causes the plaster to crumble, so that the bandage can easily be cut. It also quickly cleanses the hands of the operator from the gritty article used for securing immobility.—Atlanta Medical and Surgical Journal, July, 1873.

Mosquito Netting as a Surgical Dressing.—In all those cases where it is desirable to keep up support and pressure, and at the same time permit the free escape of all discharges from the wound, or ulcer, or whatever it may be, the ordinary mosquito netting used for a bandage meets all the indications. Bundling dressings are avoided in this way, the parts are kept cool, the discharge goes on unrestrained, and at the same time support is maintained. If the discharge is considerable, a pad of oakum may be placed beneath the parts to secure the discharge, thus insuring perfect cleanliness. This netting serves an admirable purpose in dressing large abscesses; for instance, when compression and free discharges are to be associated.—Medical Record, June 15, 1872.

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MIDWIFERY AND GYNÆCOLOGY.

Ergot in Abortion.—Dr. Corson asks (Medical and Surgical Reporter, May 31st,) "would we dare ply a woman with ergot when pregnant and threatened with abortion? Certainly not." Now I claim and can establish by the testimony of at least fifty cases, that when threatened abortion is evidenced by pain and hemorrhage, ergot in *full doses* is the safest and most certain remedy known to the profession. Not for the purpose of checking hemorrhage and expelling the contents of the uterus, but to check hemorrhage and retain the fœtus *in situ* with safety to both mother and child.

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Pregnancy in the Aged.—Dr. Meynert has communicated to us the following case which has fallen under his own observation: A lady died at the age of eighty-five, having had four accouchements. The first took place at the age of forty, the second at forty-eight, the third at fifty-one, and the fourth at fifty-six. Five girls were born, of whom three are still living, the two twins being seventy-seven years old, and the youngest child seventy-one. These three persons, the two eldest of whom have been married and have several children, still enjoy the most excellent health.—Lyon Mèdicale.

EDITORIAL AND MISCELLANEOUS.

Cholera

Is the living medical question of the day. In this country it is upon us before we had a right to expect it. If coming from its native *habitat*, it was to reach us by the extension of a great epidemic pest wave, its presence should first have been noted upon the shores of Western Europe. But whilst we learn of its increase in portions of Russia, Germany and Italy, and its near approach is stimulating our brethren of France and Great Britain to prepare for its coming, we become suddenly conscious of its fearful swoop, and behold it spread its death-wings in the great valley of the Mississippi.

The questions that first and most naturally arise are from whence is it? And how can it be stayed?

By almost universal consent for the past thirty years epidemic contagious diseases have been assigned a *specific cause.* This was regarded as a great advance in practical medicine. And yet are not the dread causes of these diseases as far as ever beyond our reach? It might be heresy in this enlightened age, but how tempted we are to ask if there be really a specific *materies morbi* pertaining to these several scourges, apart from mere meterological or electrical conditions, influence of season, locality, etc.? Certainly neither chemical nor microscopical research have revealed to us anything in this direction. As has been remarked by a recent writer, "the recognition of these agents is evidently a task more difficult than to seize and decompose the light of the planets or the dim luminosity of the nebulæ."

How useless then the hackneyed discussions upon the importation or indigenous origin of such diseases! How futile the efforts of man who is ever trusting to the most paltry sanitary cordons to avert the breath of the destroying pestilence!

A short time since our little community were seriously considering the propriety of a quarantine to exclude the "*horse influenza*," whilst, quick almost as thought, the disease was sweeping over the Continent. In regard to cholera, however, science has been lately more hopeful and, we may add, more boastful. Without knowledge of the specific cause, she has nevertheless propagated the opinion that this is contained in the excreta of the sick. The vehicles in which it is conveyed, and the avenues through which it enters the system are to many minds quite clearly settled. The Asiatic origin of the disease; the march of.

the noted epidemics, and their advance by the great lines of human travel, with at times exceptional divergence; their avoidance of certain sections, and their unexpected visitation of others, have all been most satisfactorily accounted for, and made to tally with the doctrine of a *direct* or *indirect* infection.

In accordance with such views the living body is the receptacle of a poison, generated in the East, which is capable of therein multiplying, and which is finally transmitted by means chiefly, if not solely, of the evacuations of those who have received it. It reaches the recipients directly or only after prior admixture with air, food, or water. New activity is also given by the formation at times of certain foci, and thus rapid dissemination follows.

Professor Pettenkofer considers the sub-soil water essential to active reproduction, whilst others admit conditions of soil, water, air, putrid accumulations, etc., as equally concerned. In opposition to this we have the aërial theory of Dr. Brydon, the statistical officer to the Supreme Government at Calcutta. According to this cholera is endemic, and originates in Bengal; it is diffused over the world by atmospheric currents; has a limited existence of three years, and only returns after a fresh irruption from the original source. This is going back to the ancient doctrine of an *epidemic state of the air*, by which all plagues and pestilences were accounted for.

Finally, there may be a few who hold to the belief that cholera is produced spontaneously in various sections by defective sanitary conditions.

In connection with this matter of causation, we are also obliged to recognize a possible immunity, and also degrees of susceptibility on the part of individuals. In the British hospitals in India it is said "the native hospital attendants rarely suffered. The body seems to get accustomed to, and, from habit, tolerant of the poison."

But to come to our present home condition. Certain it is that the disease in its malignant epidemic form is upon us, and practically it now matters little whether it came from the jungles of India, or has sprung up new-born in the low country of Louisiana. The time may yet come when we shall be forced to recognize many centres or sources of origin, or to coincide with the few who now look upon the disease as a naturalized exotic, or even to go back to ancient faith, give up the search after germs, and admit simply an *epidemic influence*.

The introduction of the disease into New Orleans has been rather assumed than proved. If introduced, it certainly escaped the vigilance of the quarantine officers, for there is no record of sickness with the German vessels suspected of bringing it from Baltic ports. We learn from good authority that the first death reported from cholera in New Orleans occurred on the 9th of February. The second was on the 10th of February, and two

miles from the first locality. The third on the 28th; the fourth on the 1st of March.

No doubt that before and after this numerous cases of cholera were reported by the Board of Health as diarrhœa, cholera morbus, and cholera infantum, and thus it is difficult to fix the precise advent of the disease. But from the 1st of January, 1873, to the 1st of July, six hundred deaths were said to be due to "*cholera sporadica*," cholera infantum, diarrhœa and dysentery. "*Cholera sporadica*" is credited with two hundred and thirty-two deaths. The highest mortality was on the 4th of May, when there were sixty-nine deaths from intestinal diseases, thirty-eight of these being referred to "*cholera sporadica.*" From this time the disease declined, and disappeared about the 1st of July. But little alarm seems to have been created, and certainly a most prudential quiet long prevailed.

The immense rainfall may have had much to do with limiting the amount and progress of the disease. During May this is registered at 21.87 inches; and during the past seven months about five feet of water is said to have fallen in the city. Thus the surface was effectually washed, the soil entirely saturated, and the sub-soil water kept near the level of the earth.

The subsequent spread of the disease in the great Mississippi Valley has created more alarm, and fixed the attention of the whole country. As usual it is claimed that it is spreading by the great lines of travel. Now and again it has spared certain sections where there was reason to look for it, and seized upon others more remote, or removed out of the line of its presumed route. It has been impossible, as a rule, to assign its occurrence to the direct introduction of diseased persons, or to any recognized means of indirect infection. In some instances, where parties investigating the matter have pronounced upon a clear introduction of the disease, the evidence has been as strenuously denied by the best of authorities. Nashville offers a case in point. Dr. Peters, of New York, who was sent by the New York Board of Health specially to investigate the disease, tells us that the proofs of importation into Nashville were very clear. He even affirms that cases of the disease from New Orleans "were left there by the cars," and that "negroes and Germans had come up from New Orleans and died of cholera."

Counter to this, Professor W. K. Bowling, a physician of great intelligence, and a shrewd observer, affirms in his recent graphic account of the disease, that every physician in Nashville agrees "that nobody did come here from any place and die with, or recover from cholera, neither before our cholera commenced, during its progress, or since its departure."

We shall not attempt to reconcile such antagonistic statements. We may remark, however, independent of either of them, that it is easy to understand how diseased persons passing along the great lines of travel could, without appearing to be

sick, leave at numerous points the germs believed to exist in the discharged excretions, and thus establish foci of infection, or directly furnish the poison necessary for its own multiplication when it reached the receptacle fit for its elaboration. We must ever bear in mind that germs, if there be any, may come from the mucous or serous discharges which so often constitute the earliest features of the disease; for the body has already received its poisoned sting, and mucous or serous diarrhœa is as much a part of the disease as is the collapse, the cramps, the cyanosis, the albuminous urine, or the arrest of kidney secretion.

We would not have it understood, however, that we are of those who are satisfied with this interpretation of the mode of propagation of this fearful scourge. While we recognize much of truth in the reasoning, and much ingenuity in the learned theories advanced, we feel compelled to great mental reservation. We have now neither time nor space to discuss the question further, but we would refer to one point of special interest, and which has its bearing upon the subject in dispute.

It has been boastingly said that the disease was "stamped out" at New Orleans. We think it would be equally correct to speak of our having stamped out the horse influenza on this Continent. We have never yet believed that any great epidemic disease can be so much within our control, no more than we believe in the potency of our quarantine system.

But if stamped out at New Orleans in June, will it be claimed that the authorities have since prevented its return by quarantine on the land side? There surely must, under this view, have been left in the city material enough for the germs to prey upon! And are there none of the infected from the many towns in the great valley and the Northwest country, who pass down the great rivers and back along the same lines of railroad which in May and June so swiftly conveyed the germs of disease which scattered death and desolation over a land exuberant with health?

If by stamping out we are given to understand that all "localizing causes" have been removed, we insist, without admitting the influence of any such, that yet the Crescent City has sufficiency of filth, and foul-air, and sub-soil water to make her a competent *nurse*, if not a *mother* of cholera germs. In our view, it is more probable that after a limited time no kind of nursing will sustain these potent living germs that induce our epidemics—they run their appointed race, and like all animated creation, have a time to die. There may too be something in the loss of susceptibility to the poison as already referred to; many never take the disease; some suffer but slightly. A city then that has just passed through the ordeal of a visitation must for a time at least enjoy a comparative immunity. But if epidemics of cholera may originate from an imported case of the disease, we should like to have the explanation of the present entire freedom from disease in New Orleans, Memphis and Nashville.

for us to say that we have urged no such claim. Our action has been openly taken, after mature consideration, and for reasons clearly given elsewhere. We have no objection to state explicitly here that our objects are self-protection, the good of the institution we represent, and a determination to oppose efforts made by yourself and others, in the delusive form of beneficiary scholarships, to draw young men out of our loved but impoverished State. We prefer to reserve an analysis of your very charitable offers, and to submit the action which the Trustees and Faculty of our Institution have thought proper to take to the test of time. We may, however, remark in this connection that your numerous appeals in aid of your beneficiary scholarships through the secular press, and above all your selection of an instrument in the person of the Hon. R. B. Elliott, the colored Representative to Congress from the Third Congressional District of this State, (see your letter to him in Daily Union-Herald, July 30, 1873,) has more than surprised us. As a Carolinian, dispensing charity to your native State, it might have been as well to remember that you were dealing with a yet proud, if a down-trodden people.

"Your third statement we contradict most feelingly, as well as knowingly, when we say that not one cent of the money obtained from students under our present system has gone into the Professors' pockets. Our Demonstrator of Anatomy is paid a stipulated sum; the balance of the money collected goes to defray the expenses of the College, which rest wholly upon the Faculty.

"Your fourth statement is again a question of arithmetic. Our present matriculation fee is twenty dollars. That of most other Colleges, as you affirm, is, as was our own in past times, five dollars. Please look to the multiplication table and determine the difference between twenty dollars and seven times five dollars.

"Thus, according to our clear showing, your journal, rather than our College circular, is the means for '*deceiving students.*' If the allusion to the beneficiary system in our circular has, like many a random shaft, flown straighter, and penetrated deeper than either we divined or you desired, we nevertheless trust that, apart from any interest you feel in us as 'friends of your boyhood and manhood,' you will see the propriety of according that justice which truth has a right to demand.

"Very respectfully,

"Your obedient servant,

"R. A. KINLOCH, M. D.,

"Dean of the Faculty,

"Medical College of the State of South Carolina."

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ART. I.—*Epidemic Yellow Fever in Montgomery, Alabama, Summer of* 1873. By R. F. MICHEL, M. D.

It is eighteen years since the City of Montgomery was visited by an epidemic of Yellow Fever; but, in common with several sister cities of the South, she has again been compelled to pass through the trying ordeal.

It is not the object of this paper to enter into a learned disquisition upon the pathology and treatment of this disease, for after the labors of LaRoche and the leading medical writers of Charleston, New Orleans and Mobile, it would be almost presumptuous. But feeling the necessity of a proper medical record for our city, and that the historian may hereafter find some material to guide him in his researches, I have determined to give a brief, but, I hope, proper account of the epidemic through which we have just passed.

I do not believe that our fair city should be placed in the Yellow Fever Zone; and if by any possible means she can be there assigned, I, for one, am determined that her position shall be upon its Northern border.

My opinions with regard to the contagion and importation of Yellow Fever are well known to all of my medical friends in Charleston. A non-contagionist, and one who believes as much in its local origin, as in its being an exotic, can with good grace take the position, that the disease which proved so fatal this year in the City of Montgomery was brought from abroad; did not spring up on its soil; was accidental, and does not properly belong to its climate.

For two months prior to the visit of Yellow Fever we had been imminently threatened with Asiatic Cholera. Two of the cities of the State, Huntsville and Birmingham, were being then

seriously damaged by the havoc of that rapidly fatal disease. Indeed, one case absolutely made its way into our capital, but, fortunately for us, did not take root. In consequence of this condition of affairs, our city authorities worked well, and worked hard, to fend off the threatened invasion; and, with credit to them, be it said, they were absolutely successful. With lime, carbolic acid and coal-refuse scattered freely over the surface of the city; with our soil undisturbed, cellars dry, and the offal thrown on the banks of the river, we were safe, perfectly safe, from the disease. I mention this fact in order to call the attention of the profession to the inutility of hunting for a *local cause* upon which to build any theory with regard to the advent of Yellow Fever in the year 1873 in the City of Montgomery.

Whence came it? and, how did it progress? are the questions most likely to occur, and to their consideration I now invite your attention.

I propose to show that the Fever was brought from Pensacola, Florida, by two persons, viz, Mr. D. H. Cram, President of the Pensacola and Louisville Railroad, and Mollie Jackson, a white woman. Both of these persons were in Pensacola when the Yellow Fever broke out, and had been living near the first recognized cases.

Mollie Jackson left Pensacola on the ninth day of August, arrived in Montgomery on the 10th, and went to the house owned by Mr. Collins, on Clay street, South side, two doors from the corner of Wilkerson, marked M. J. on map. Mr. Cram left Pensacola on the 14th day of August, arrived in Montgomery on the 15th day of August, and went to his home, at the corner of McDonough and Madison streets, owned by Mr. Stubbs, marked D. H. C. on map.

Mollie Jackson was taken sick on Sunday morning, August the 17th. I was sent for, and found that she had had *a chill* in the night, and her pulse and general condition indicated *fever*. I visited her four days, and upon the declination of the fever my bill was settled, and I informed that if needed I would be sent for.

Upon the morning of the 27th of August I was requested to give an interment certificate; and, not knowing at that time that she died of Yellow Fever, gave as cause of death "Congestive Fever," having seen her only through the febrile paroxysm, and not suspecting at the time that she was from Pensacola, or that there was an epidemic in that city.

My friends, Drs. Johnston and Douglass, examined the body after death, and I was informed by Dr. Johnston that he looked upon the case as one of Yellow Fever, in consequence of the extreme yellowness of the skin. I immediately determined to examine the nurses who waited upon the case; and, after a careful cross-examination of each witness, I became perfectly convinced

that Mollie Jackson died of Yellow Fever, contracted at her residence, *exactly* opposite the hospital in Pensacola. I may, in this connection, state that one of her nurses went to West Point, Georgia, "sickened with fever, was very ill, and threw up blood from the stomach during the attack," according to her own statement.

Now, with this nucleus, what occurred in this neighborhood? Case after case repeated itself, and almost every house in the three blocks adjoining became infected.

Opposite the house of Mollie Jackson are four houses, the property of Messrs. Barrett and Collins, and in every one there were cases of Yellow Fever, and two or more deaths by this disease—the Breshears, Robinsons, Harveys, Alexanders and Georgie Harris.

Turning the corner of Dickerson street we find two houses, one occupied by the Wilsons, the other by the Mulchays. A death in both, preceded by black vomit, determined the character of the disease; while just opposite, on Bell street, Dr. Herreford reports three cases and one death at the Singletarys; Dr. Norton two cases in the family of the Campbells.

We find in the street marked Herron, every house in that neighborhood visited, except two. The Hales, Pat. Thorinton, O'Brians, Sanderson, Browns, Stewarts and Kelleys, fill up the sad history of this memorable block. Dunham's Row, according to the testimony of Drs. Norton, Means, Johnston, Michel, and others, suffered in common with the surrounding locality; while to the rear, on Holt street, we find the serious illness of the Rays and Wings. The next parallel street, marked Martha, also furnishes cases of this severe disease, in the persons of the Curans, Temples, Stuarts and Ovens; particularly sad and fatal in the last family.

It would be idle to dwell further upon the history of this part of the city. The *resumé* of the cases demonstrates how this ward suffered, and the dark outline of death marks well the surroundings of Mollie Jackson.

Mr. D. H. Cram, as already stated, arrived on the 15th day of August, was taken sick the night of the 17th or 20th, and had *a fever*, which lasted several days.

I believe his attack was Yellow Fever, and I will now proceed to give my reasons for this statement, although *I did not see him during his sickness.*

Being President of the Pensacola and Louisville Railroad, Mr. Cram was compelled, in the official discharge of his duties, to remain in Pensacola as long as possible, and I have no doubt that sleeping in the locality in which he did, he was fully exposed to the poison.

I here take the liberty of introducing a part of a very valuable letter, written me by Dr. R. B. S. Hargis, of Pensacola, upon the

epidemic in that city. This letter was written in answer to some questions propounded to him by myself. Dr. Hargis is well known to the medical public, through his valuable contributions to the literature of Yellow Fever:

"Pensacola, November 6th, 1873.

Dr. R. F. Mobley, *Montgomery, Alabama:*

My Dear Doctor. After some days of unavoidable delay, in compliance with my promise, I essay to answer your letter dated the 20th ult., trusting that I may be able to communicate the information which you desire, so as to render it useful to you, in some degree, at least.

1st. Mrs. Nisbet arrived in Pensacola, from New Orleans, on the 22d of July, got sick on the 7th of August, and died on the 14th of August.

2d. Mrs. Pindle was taken sick on the 9th, according to her husband's statement, but from the condition in which I found her, I believe she was sick down on the 7th. I saw her for the first time on the 10th, she was then "bronzed," had hemorrhages from the nose, mouth, buccal mucous membrane, fauces, and rectum. Died on the 11th, 12th and 13th: died on the 14th, in the morning.

3d. Captain [illegible] was sick on the 14th of August; had black vomit and died on the

[illegible] from Havana on the [illegible] quarantine, remained [illegible] and returned to [illegible] on the 31st [illegible]

[illegible] night days [illegible] 1st day of August, [illegible]

[illegible] of August, and [illegible] consequence [illegible] monster she [illegible]

[illegible] that [illegible] [illegible] different [illegible] August. The [illegible]

atmosphere, as I before intimated, was in a favorable condition for many days, in July and August, for the propagation of infectious germs of any kind from a foreign source.

8th. Mr. D. H. Cram left Pensacola on the 14th day of August, the same day on which Mrs. Pfeiffer died. The distance between his office and the room in which Mrs. Pfeiffer died is about eighty to ninety feet, nothing intervening but air and dust, and whatever else that may have been *invisible*. Mr. Cram, however, had been inhaling the same deleterious principle that poisoned Mrs. Pfeiffer a week at least before the latter was taken sick. So was Mrs. Nasite and the rest.

Mrs. Nasite resided on Intendentia street, that which crosses Taragone street at right angles, East and West, one block from the Railroad Depot on Taragone street, where Mr. Cram's office is situated. Mrs. Nasite was not removed.

Now, Mrs. Nasite and Mrs. Pfeiffer were the first two deaths, but not the first cases. The first three cases were taken sick at the same time, on the 6th of August, in the same house, the residence of Mr. W. McKinzie Orthing, Deputy Harbor Master, on Romana street, two squares distant, North of Mr. Cram's office. Mr. Orthing, no doubt, carried the germs of the disease home in his clothes, as he had been frequently on board of the vessel, and stayed there many hours at a time. But as nearly all the first cases sickened about the same time, on the 7th, I believe that the infection was transported from the ship by the winds, and leavened the atmosphere in its course.

The next four cases occurred on Romana street, near the residence of Mr. Orthing, on the 7th of August. After this time two or three new cases appeared daily, until the 15th, when the disease became epidemic.

The width of the district first infected, measuring from East to West, was about one square, a little more perhaps, and did not increase for fifteen days; it extended, however, for a mile, in the direction of the winds, Northeast. The disease spread over the city from different centres, or foci, created by persons who contracted the malady, either from the ship itself, or from the atmosphere of the infected part of the city, wherein they exposed themselves by visiting at night.

Now, that there may be no misapprehension in regard to the origin and mode of propagation of the epidemic here, I shall make a few additional observations, and then briefly recapitulate what has been already stated, and include in the recapitulation other sporadic cases that intercurred at different dates, between the 6th of August and 15th of the same month.

The atmosphere had been for some time previously to the introduction of the disease in a favorable condition to foster any new morbific principle that might be introduced, and continued during the epidemic, with very slight variations, to maintain that

state. It was humid, negative with respect to electricity, free from ozone, and continued at a mean temperature of 80° Fah. Our endemic diseases became rife about the middle of July, and prevailed until the Yellow Fever made its appearance, and then, *as always*, every other disease either assumed its livery or was united with the nature of itself.

The winds came from the South and Southwest during the day, and from about the 28th of July until the epidemic had become general, about the 20th of August, it swept gently over the Golden Dream from the Southwest, and carried with it through the "devoted" district the infectious matter which that vessel brought with her from Havana.

The Golden Dream laid off about five hundred yards from the beach. The first case of which we have any certain knowledge that occurred on board of this vessel, after she left the Quarantine Station, was that of the sailor from the cutter Petrel. He was taken sick on the 2d of August, and died on the 5th, with black vomit. The first cases in the city appeared on the 6th of August, at Mr. Orthing's; next in order were those at Mr. Kaber's, Mr. Chandler's, Mrs. Nasite and Mrs. Pfeiffer's, on the 7th; then the several stevedores, one or two daily, until Ed. Dunn fell sick, on the 14th day of August—afterwards epidemic.

Our population, after the fever made its appearance, was reduced, "*by the stampede*," to about three thousand, of whom, in round numbers, one thousand were liable to contract the disease. It is estimated that of the latter six hundred were attacked; the mortality numbered just sixty-one.

Here, my dear doctor, this communication must terminate. I have written necessarily in haste; it is, therefore, very imperfect, but you can eliminate the facts it contains, and rest assured that they are "*facts*."

I am, very respectfully,
Your obedient servant,
ROBERT B. S. HARGIS."

It may not be irrelevant, just here, to quote from a letter written me by my revered teacher, Professor S. H. Dickson, dated Philadelphia, October 20th, 1867, and in answer to the question I had propounded: "At what distances have you known Yellow Fever to radiate from a centre?"

"MY DEAR DOCTOR: As to the Yellow Fever question, the true mode of regarding all such particular instances, is fairly this: Decide the general question—is the disease portable, communicable, contagious in any sense? If so, there can be no difficulty as to one hundred or two hundred yards of interval, or fomites, or currents of air, and the like.

We cannot trace small-pox always, nor measles, much less mumps and whooping cough; but the obscurity of the links of

connection does not shake our belief of the dependence of every case that we meet with on some preceding case.

Dr. Thomas Y. Simons, whom you remember as Quarantine Physician, and an obstinate non-contagionist, told me that he had known the lapse of twenty-five days between exposure and attack in Yellow Fever.

I remain, dear doctor, yours, truly,

SAMUEL H. DICKSON."

I think my readers have sufficient evidence for my statement that Mr. D. H. Cram and Mollie Jackson were exposed, in Pensacola, to the *Yellow Fever poison*, and, indeed, did not leave there until the epidemic prevalence of the disease.

In addition, I may mention the fact that Mr. Cram's physician, just returned from a healthy locality in Virginia, became quite sick during the month of August, or early in September, and his convalescence was so protracted that I incline to the opinion that he suffered with the same disease.

Now for the sequel. With Mr. Cram as a nucleus, let us critically observe what took place in this portion of our city—*Ward* 5.

On Madison street, next door to Mr. Cram, is a house owned by Mr. Noble, and occupied by Germans, some of whom had lately arrived from Illinois.

The distance from the chamber in which Mr. Cram was sick, to this house is exactly thirty-two yards.

On Friday, September 4th, one of the inmates took sick, Mr. John G. Schan, and died on the 12th day of September. On the same day (September 4th) Mr. Heinecke, of the same family, also sickened and died on the 14th day of September. Geo. Fisher, another inmate of the house, sickened on the night of the 6th of September, and died September 14th; and, again, another of the family, Ed. Heinecke, took sick on Tuesday, September 16th, and died on the 21st. The last remaining male inhabitant of that fatal building, Mr. F. Schan, aged twenty-nine years, and the proprietor of the establishment, sickened, as reported by his physician, Dr. J. M. Williams, and on Thursday, the 25th day of September, at half-past eight o'clock A. M., breathed his last. Dr. Williams reported this case as Yellow Fever. I saw Mr. Schan, in consultation with the doctor. We examined the black vomit carefully, and I reported the result of that examination to the Board of Health.

I believe that every one of these five persons died of Yellow Fever, and I think I am sustained in this opinion by two of the attending physicians.

In Mr. Cram's kitchen, fifteen yards from this house, Jim Higgins, husband of Mr. Cram's nurse, sickened and died with Yellow Fever. I saw this case at the request of the attending physician.

Several persons visited the sick Germans, and many of them sickened; among these I may mention Eugenia Harris, McCarthy, and Schnaibel. These three had Yellow Fever, the first two dying with black vomit.

On McDonough street, next to Cram's, is a row of brick buildings, owned by Mr. Stubbs and the Fountain Estate; not one of these residences escaped. The Bealls, the Wans, Mrs. Sistrunk (and I am here saddened by this last record), sickened, and many of them died. The lovely lady named, although removed promptly to a different part of our city, in order to escape the terrible pestilence, became instantly sick, and died of Yellow Fever.

In the Inglehart House, on Monroe street, are two deaths by the epidemic disease, and on the next block we observe that not a house escaped; each was visited severely; it has been well termed the *fatal point* in the city. Harris lost three children; Moncreef, McCarty, Mr. Mathews, the Copees and Caminades, all died; and, in my house, on the same block, there occurred two very severe cases. My neighbor, Mr. Woolfe, suffered also from an attack. In these two blocks we have seventeen houses; three were uninhabited, the Washburns, the Fountains and Jannyes; and, at the close of the epidemic, we see reported eighteen deaths in this locality by Yellow Fever.

I call attention to the fact, that up to a certain date, the ravages of this disease were confined almost entirely *to the two wards, one and five.*

But suddenly we are notified of the sickness of Mr. Putnam Larkins, who was attacked on Saturday, the 27th of September. This gentleman died of Yellow Fever, on the 3d of October, in the very centre of the city, opposite the Masonic Temple, as shown on the map.

Now, from this point, the disease stealthily crept up Commerce and Court streets, affixing its fatal mark upon many buildings on each side of the way—Halzer, Jim Walker, Yung, Fremon, Goodwyn, the fatal Begg's corner, with five deaths in one family, Miss Cheney, Sewys, our distinguished physician, Dr. Jackson, Isaac, and the Spanerburgers, give evidence of the regular advancement of this horrible disease.

From these points it radiated in every direction, and our city soon fell a victim to one of the most fatal and extensive epidemics of Yellow Fever ever experienced by its inhabitants.

The *extent* and *severity* of the *epidemic* I propose to prove by the fact that no portion of our city escaped, and that of the few, very few, white persons who remained, the number not exceeding eighteen hundred, between four and five hundred sickened with the disease.

On examining the number of white families who lived, *day and night*, on the three most important streets of the city—Court, Perry and Madison—I find only seventeen to be recorded. In

fact, on Madison, only the Brittons, Michels and Harrisses remained.

With regard to the mortality, the Board of Health reports eighty cases of deaths by Yellow Fever. To this permit me to add the following persons, who, in my opinion, died of the same disease, notwithstanding the interment certificate given: Mollie Jackson, Mrs. D. W. Wilson, G. Schan, T. Schan, Heinecke, Sr., Ed. Heinecke, Jr., Fisher, Mrs. E. Holland, Mrs. Sistrunk, Miss Spanenburger, Fred. Stewart, Fannie Stewart, Jim Higgins, Mrs. Glover, John Pollard, T. Terry, Hannah Mason, Julia Ware, McCutchen, B. F. Benton, D. Packer, D. S. French—twenty-two.

Of the five hundred cases, we therefore lost at the smallest calculation one hundred persons, some of them our most valuable and prominent citizens. Of the hundred, sixty are accredited to ward five, twelve to ward one, and twenty-eight scattered.

A remarkable feature in the history of this epidemic is the number of colored persons who were attacked. It is true, however, that very few died.

In Charleston, although occasionally one of this class fell a victim to the disease, they, as a people, were considered almost exempt. I do not remember seeing half a dozen black persons sick with Yellow Fever in the many epidemics I witnessed during my professional life in Charleston.*

A few persons, after leaving our city, became subjects of the disease; two dying, and several recovering. The disease however *did not spread* in the localities in which they occurred, viz, Mr. Attoway, West Point; John Pollard, Auburn; Mrs. Glover, Tuskogee; Mr. Thorgheville, Wetumpka; Mr. F. M. Thouse, Talladega; Miss Nellie Woolfe, Greenville; Mrs. F. Woolfe, Greenville.

Another important question for our consideration is this—did we have any other epidemic disease to treat during the sojourn of Yellow Fever in our city?

The physicians of Montgomery are well acquainted with the fact that, during the months of August, September, and especially October, we are generally busily engaged in attending malarial diseases. It is remarkable that these milder diseases were rarely visible after the appearance of Yellow Fever. They moved out of the way, to give precedence to this terrible pestilence. As the distinguished Dr. Rush, of Philadelphia, well said: "When the giant Yellow Fever makes his entrance into a city, all other diseases at once put on his livery."

The difficulty with most of the people is to understand the fact that, in an epidemic of Yellow Fever, we have a great many

*NOTE.—Our experience differs from that of Dr. M. We have seen numerous cases among the blacks during our epidemics, but these were of light character, and usually ended in recovery.—[EDS.

mild cases. Some of our patients are only kept in bed forty-eight or seventy-two hours, but that fact does not prevent us from properly calling these cases Yellow Fever.

Take an epidemic of Asiatic Cholera, painful, terrific, and rapidly fatal. See what Professor Niemeyer says of cases of simple diarrhœa occurring during such a period:

"The mildest form is a simple diarrhœa, which is not accompanied by colicky pains or tenesmus, and causes no constitutional or other disturbance, except a moderate degree of depression and relaxation. The evacuations follow each other more or less closely; they are very copious and watery, but have neither lost their odor nor color. These cases do not appear on the official lists as cholera; but although the police do not consider them as such, science should do so."

These persons transport Asiatic Cholera by their *dejecta.*

Now, if these simple cases are regarded as mild attacks of Asiatic Cholera, why should we not at once admit the mild cases of Yellow Fever, attended simply by *a chill*, followed by *fever*, pain in the head and back, and slow convalescence?

I here quote a part of a letter written me by Professor R. A. Kinloch, of Charleston, dated November 8th, 1873:

"Look almost anywhere for authority, and you find the fact admitted that there is the 'mild,' or '*simple*' form, as well as the '*gravior*' and the '*malignant*' form of *Yellow Fever.* Blair, I think, it is, who says, '*you may have the disease from a flea-bite to the plague.*' That is appearing as a case of the simplest kind of mild sickness, or again assuming the form of a terribly malignant disease.

"In my short reply to Professor Jones, in the October number of the *Charleston Medical Journal and Review*, I refer to the several varieties. The thing is to recognize *different degrees of susceptibility, and of acclimation* in the individual; and also different *doses of the poison*, or *degrees of its dilution.* This will explain all. Take, if you please, either Scarlet Fever, or Asiatic Cholera, and you see this point equally well exemplified.

"Epidemics differ much in this regard, some having a very large proportion of grave cases; others the reverse.

Yours, in haste, R. A. KINLOCH."

I have said repeatedly and positively to my professional friends that we had no dengue or anything like it in Montgomery during the prevalence of Yellow Fever, and I will now give my reasons for the faith that is in me.

Professor Dickson, the most elaborate writer upon Dengue, thus describes it:

"Dengue usually made its invasion with pain, stiffness, and swelling of some of the smaller joints, often of the muscles of a limb, rigidity of the neck, aching of the back and loins. These

pains were followed, after an uncertain, though generally brief period, by headache, suffusion of the eyes; abrupt, full, frequent pulse; hot, pungent, dry skin, restlessness, thirst, and other tokens of febrile excitement. The fever did not remit, but declined and disappeared in a great majority of cases on the second or third day. In this early stage the tongue was generally clean, and the stomach quiet; but sometimes there was nausea or even vomiting, the determination to the head was occasionally violent. Instances occurred in which delirium was among the first symptoms, coming on at the commencement and enduring until the subsidence of the febrile paroxysm. At this time the skin lost its heat and dryness, becoming relaxed, with abundant perspiration, and the local pains were all lessened in degree. A sort of miliary eruption, or rash in some persons, attended this sweating stage, and in a few others preceded both the local pains and the fever. It was, however, as connected with this first stage of dengue, a very inconstant symptom, seeming rather a coincidence than a symptom. The pains of the joints and muscles which, as has been said, were diminished in severity at the subsidence of the febrile exacerbation, did not go off entirely; a degree of swelling, stiffness, and tenderness of the affected parts remaining permanently, though varying much in intensity in different individuals. This condition of things constituted a sort of deceptive interval between what may be described as the first and second stages of this strange disease. Many now believed themselves to have passed through the attack, and attempted to resume their ordinary occupations; but soon had occasion to discover that their sufferings were by no means at an end. On the third or fourth day, there being no fever present, or a very obscure degree of it, the tongue would begin to be coated with a yellowish fur, and the stomach would become distressed, uneasy and irritable. The patient was now low-spirited, fretful and anxious. Vomiting come on in some, with great langour, lassitude, debility, and restlessness at night. This was regarded as the most oppressive and insufferable of the stages of the malady. On the fifth or sixth day from the invasion, the period varying somewhat in different individuals, the annoying symptoms just described were relieved by the coming out of an abundant eruption, met with so constantly and in so very great proportion of the cases, that it clearly demands to be considered a characteristic and essential circumstance in the history of the disease. It consisted of minute papulæ, somewhat elevated, of a florid red, and distributed in irregularly shaped patches; the feet and hands being somewhat swollen, with a sense of numbness and thickening. It appeared first on the face, then on the trunk and thighs, gradually spreading to the extremities. It resembled scarlatina more than measles, in the hue and aspect of the skin, but was less diffused or confluent than either. When fully developed, it

was attended with some itching and burning of the surface, and at this time a second febrile paroxysm came on, with return or aggravation of the muscular and arthritic pains. Inflammation and enlargement of the lymphatic glands in the neck, axilla and groin, attended in a good many cases; these parts being apt to continue swollen and painful for some time after convalescence was finally established. In a few instances suppuration of these tumors took place. The eruption disappeared after two or three days' duration, becoming gradually paler, with some desquamation of the cuticle. Of all the symptoms of dengue the affection of the joints was the most tenacious and troublesome, adhering for weeks to some patients, and constituting a sort of permanent lameness or loss of mobility. Nay, even so late as 1835, some of the population of cities visited by this plague persisted in speaking of the rheumatic or quasi-rheumatic decrepitude and pain under which they labored as the effects of dengue.

"Pregnant women, when attacked, were very liable to abortion, and a remarkable number of miscarriages and premature labors occurred. A sore mouth was among the frequent symptoms; ulcers formed in the mouth. Dengue is to be classed properly among the exanthemata. It is an eruptive fever of distinct and specific character. Its essential symptoms are, in the first stage, a painful affection of the joints and muscles; and, in the second, divided by an interval obvious and sufficiently regular, a cutaneous eruption. The arthritic inflammation of the first stage was attended by fever of the ordinary inflammatory type, of twenty-four to forty-eight hours' duration. The eruption was preceded, as is usual in the exanthemata, by considerable gastric oppression, with nausea, and sometimes vomiting."

We must insist upon the fact that mild cases of Yellow Fever be not confounded with this painful, very painful, but perfectly harmless affection, well known to the profession as free entirely from danger to life, which it may annoy, but never destroys.

Look carefully at the premonitory symptoms; watch well the kind and severity of the pains, which mark the onset, continuance and termination of dengue. No chill—mark that; no mention of even a rigor. Observe the intermission, not accidental, not occurring by chance, but regular, never deviating, always coming to the relief of the sufferer, and to be counted with certainty by the hands of the clock. Then examine the secondary fever, accompanied always by an eruption that Dr. Dickson says, "clearly demands to be considered a characteristic and essential circumstance in the history of the disease." Look at the prompt convalescence of dengue, with the deformed and enlarged joints; the patient, staggering about, bald-headed, with stick in one hand, or crutch in both. Observe the common accident of abortions and premature labors, and then say if this condition of things resembles, however remotely, not the violent cases of Yellow

Fever, with black vomit, discoloration and bleeding from gums, lips and nose, but the milder and more numerous cases of Yellow Fever frequently met with during an epidemic, easy of control, but very tardy in convalescence.

Pathologically considered, dengue is one of the exanthemata, and I challenge the proof that it has ever been regarded as "a hemorrhagic disease," by any standard authority. No one values authority more than I do, but I must insist (not in a name) that the authority carry with it force and character upon the subject matter under consideration. I repeat, that I do not believe there was any dengue in our city during the Yellow Fever epidemic, and the profession bears me out in this statement. At a meeting of the members of the Montgomery Medical and Surgical Society, for the purpose of discussing the epidemic of Yellow Fever, it was unanimously decided, by the physicians who were in Montgomery during the epidemic, that no such disease as dengue had been observed.

With reference to the pathology of Yellow Fever, I have hardly anything to say. We made no *post mortem* examinations, and very few chemical investigations; consequently the researches of Blair, Lewis, and Joseph Jones, were not again repeated and confirmed. I examined the urine and the black vomit of several cases; found albumen as stated by Blair in the one, and the characteristic features of the others, as *first insisted* upon by Dr. Middleton Michel, in the *Charleston Medical Journal*, May, 1853, and by Dr. Hassell, of London, for February, of the same year.

Dr. Joseph Jones has stated that the lesions of the heart are characteristic in this disease; that the heart is structurally altered and enfeebled; oil and granular albuminoid or fibroid matter, is deposited within and around the muscular fibrillæ, and the organ after death presents a yellow, flabby appearance. He says we must keep our patients quiet, in order that the heart may be restored to its free and vigorous action. The profession owe Dr. Jones a debt of gratitude for his very practical pathological demonstrations.

This feeble condition of heart was frequently observed. In the case of my son, Middleton Michel, I found his heart at forty for three days and nights, and for several hours during that time only beating thirty-eight per minute.

It is well known that this peculiar disease, in its initial stage, may be characterized by individual idiosyncracy. I know of five cases in which the disease was ushered in with convulsions, and most of these were in persons of intemperate habits.

Some of the cases were prolonged for fifteen or twenty days before they terminated fatally, while others were rapid in their results. Mrs. Shields died with black vomit, exactly eighty-five hours after the initiatory chill. Most of the fatal cases, however,

are recorded as dying on the fifth or ninth day. Abortions occurring during the febrile attack, as a general rule, proved fatal. This was not the case when the product of conception was carried to its full term. Mrs. D. and Mrs. B., subjects of the disease, recovered promptly, and the children are doing well. Almost all of the cases occurring among females were accompanied by hemorrhage from the uterus. This bloody sweat from the mucous membrane of the vagina and uterus was first described as a symptom of Yellow Fever, by Dr. Middleton Michel, in the eighth volume of the *Charleston Medical Journal*. I was present and assisted my brother in these pathological investigations, and can now further confirm his statements from observations during this epidemic.

TREATMENT.

With regard to treatment, the profession here generally believing the disease self-limiting, seldom resorted to medicine.

When called to see a case, the patient was placed in a hot mustard bath; castor oil or seidlitz powders were resorted to as aperient; very few, if any, administered mercurials. Mild diaphoretics and diuretics were used, as orange-leaf tea, black tea, or sage tea. After the full effect of the bath was realized, the action on the skin was kept up by warm mustard pediluvia administered under the covering, without exposure of the person.

In the stage of restlessness, chloral was given generally by the rectum, rarely by the mouth, with good effect. Narcotics were regarded as unsafe remedies. For myself, as soon as I found sighing, respiration, and frequent eructation, I generally placed a large blister on the epigastric region. In the case of my son, who had black vomit, I feel assured that it controlled the nausea.

Stimulants, as a general rule, were avoided, except during convalescence, when they were used in order to assist the heart in its propulsive efforts. Brandy and Champagne were those most frequently given. In cases attended with great prostration they were very cautiously administered during the febrile stage.

Solid food was strenuously avoided; but beef tea, milk and lime water, gruel, chicken broth, and arrow root, permitted.

Rest, absolute rest, was insisted upon; and hence very few cases of sudden death during convalescence are reported. An equable temperature in the sick room was constantly maintained.

Quinine was only used as a prophylactic, and in some cases with apparent success.

It will be observed, on examining the tables of Mr. G. A. Clum,* to whose kindness I am indebted for the valuable meteorological records, kept carefully by him during the epidemic, that the fever

*These tables, for want of space, we have to exclude.—[EDS.

travelled with, and against the wind; and that rain, or clear weather, made no material difference in its severity. But when we come to the consideration of the effect of cold, we find again the old established and well understood principle carried out: Frost destroyed the Yellow Fever poison in Montgomery, just as it does in every locality.

The first frost occurred on the twenty-first morning of October. This was so slight as not even to kill tender garden plants, and many persons in the city denied its existence. On the morning of the 29th of October we were favored with a "black frost," frost with ice. The same thing occurred on the following morning, and on the morning of the 31st of October we had a white frost.

Now, taking nine days for the full period of incubation, and nine days for disease and death, we should not have a death by Yellow Fever recorded after the sixteenth day of November. And this calculation is correct, for we observe that the last death by Yellow Fever (subject Mr. Leroy Taylor) occurred on the tenth day of November, at 12 M.

Previous to this epidemic, Montgomery had been visited three years consecutively by Yellow Fever—1853, 1854, 1855.

Having no medical record to guide us in drawing a comparison between these visitations, and the one through which we have just passed, I have selected a most reliable account, carefully prepared by an old citizen. This record has been kept with zealous care, in the Supreme Court Library of the State.

In comparing these three epidemics with that of 1873, it is very observable that the disease this year has been more grave, more extensive, and remained with us longer than it ever did before:

"The Yellow Fever was first declared to exist in this city the latter part of September, 1853. The first interment from the disease was on the 22d of that month. The total interments for that month were twenty-eight whites and eight colored; of the whites, nine were Yellow Fever. In October, 1853, of the fifty-three whites interred, twenty-two were from the fever. In November, 1853, there were four interments from the fever.

"In September, 1854, there were twelve whites interred, of which six were from Yellow Fever. In October, 1854, of the fifty-two whites interred, thirty-seven were of persons dying from that fever. The largest number buried in one day, was on Sunday, the 22d of October, 1854, which was the following named *seven:* Joseph Knox, James Narramore, Mrs. Clara Connally, Oliver Reed, Miss Francis McGuire, Mary Binnard, and Isidore Binnard. In November, 1854, there were two interments from the fever.

"In September, 1855, of the seventeen whites interred, seven were from Yellow Fever, and, in October, twenty-one of the

thirty-four were from the same disease. In November, 1855, there were two Yellow Fever interments, among the whites."

The Board of Health of Montgomery declared the disease epidemic on the sixteenth day of October, in accordance with the well known rule governing the Boards of Mobile and New Orleans, viz: "That the deaths by the epidemic disease should exceed the deaths by all other causes"—a rule as arbitrary as unscientific; one to be honored more in thé breach than the observance.

My only object in referring to this matter is to enter again my protest. I earnestly hope that the Boards of Health may be governed hereafter by a different rule.

I beg to introduce to the readers of the *Journal*, two intelligent and authoritative letters, written me during the late epidemic, upon the subject of *Epidemicity*. One from Professor Bemiss, of the University of Louisiana; the other from Professor Kinloch, of the Medical College of the State of South Carolina:

"NEW ORLEANS, October 18, 1873.

TO DR. R. F. MICHEL:

DEAR DOCTOR: Undoubtedly, in a purely professional sense, the term epidemic is applied to diseases with very different degrees of prevalence, so that it becomes difficult to decide when, as physicians, we should pronounce a malady "epidemic." I should say, that in a professional use of the term, we ought to regard any disease as epidemic which has become so prevalent in a population, that we meet examples of it more frequently than we meet with cases of any other one form of disease. In respect to all those diseases which are admitted to be in any manner communicable, it is quite usual to declare them epidemic before they have reached this degree of prevalence; and we are certainly right in doing so, when, by any kind of sanitary measures, we may be able to diminish the number of attacks.

The difficulty in answering your question has presented itself time and time again to the Boards of Health of this city, until they at last adopted *an arbitrary rule* for obtaining it. This is, to declare a disease to be epidemic when the deaths due to it, exceed in number those from all other causes combined.

I write with very great haste, but have given you as frank an answer as I am capable of making.

Very respectfully,

L. M. BEMISS."

"CHARLESTON, S. C., October 18, 1873.

MY DEAR DOCTOR: In answer to your card, I can only say that you put a difficult question, and one that can only be arbitrarily answered. An epidemic disease in a city is, of course, as the derivation of the word implies, a disease that is *upon the*

people, or, as I understand it, one that affects so many persons as to attract marked attention, and lead to apprehension of a greater spread of said disease, depending, as is believed, upon an unusual prevailing influence.

When the disease is a well recognized one, and one known as a rule to prevail epidemically, as does Cholera and Yellow Fever, the fact of the existence of almost any unusual number of cases, not confined to a limited section, but scattered, and leading to the inference that any of the people may be the next victims, I think entitles the disease to be called epidemic. As I intimated before, it would be simply arbitrary to limit the name epidemic to *a definite number of cases.* If you fixed upon *fifty cases* as the number necessary to constitute an epidemic, I might with equal propriety insist that *twenty cases* were sufficient.

It occurs to me, that the proper ground to take is that founded upon the reasonable probability of the disease spreading. In other words, if the cases are so numerous, occur in such quick succession, and are so scattered as to locality, as to render questionable the idea of their being *simply sporadic*, I would consider the disease epidemic.

Under such circumstances I should say that twenty or thirty well marked cases of the disease would warrant any one in considering the disease epidemic.

I don't know whether this answer will satisfy you. It is the best I can give.

Truly yours, R. A. KINLOCH.

Dr. R. F. MICHEL, *Montgomery, Ala.*"

In conclusion, permit me to say that it is a fact, remarkable in the history of this epidemic, that so many of our profession should have been attacked. While it serves to illustrate the zeal and devotion which characterize the profession to which we belong, it also most significantly demonstrates the highly infectious nature of the terrible disease with which we have had to contend. I take great pleasure in recording the names of the gentlemen who, while disinterestedly laboring for the preservation of human life, suffered with the disease: Drs. E. A. Semple, S. D. Seelye, F. Lynch, W. C. Jackson, J. B. Gaston, F. Persall, J. A. Fremon, and James Douglass.

ART. II.—*Pathologico-Therapeutic Studies of "Catarrhal Pneumonia." etc.* By J. F. M. GEDDINGS, M. D., of Charleston, S. C. [*Continued from page* 137.]

SYMPTOMS, COURSE AND DURATION.

The symptoms of catarrhal pneumonia vary in different cases, being more or less modified by the character of the antecedent primary disease, of which the catarrhal process is the sequel.

This variation in the symptoms, necessitates the recognition of one or more forms, each presenting clinical features worthy of note. Experience induces me to recognize two forms, viz: an acute and a sub-acute, or chronic. Whilst the acute form, occurring as a sequel of measles, variola, febrile stage of pertussis, and acute bronchial catarrh, presents a clinical picture, corresponding, in many particulars, with that of croupous pneumonia; the chronic form, resulting from the non-febrile stage of pertussis, chronic bronchial catarrh, etc., presents features differing materially from those incidental to the croupus variety. Furthermore, the symptomatology is modified according as the pneumonic process is due to direct transfer of the catarrh from the bronchioles to the alveoles, or is the result of ateletasis. In most cases of the acute form of catarrhal pneumonia, the disease is due, as already stated, to direct transfer of the inflammatory action; in the chronic form, on the contrary, ateletasis is usually the antecedent condition of the pulmonary parenchyma.

For convenience, and in order to delineate more clearly the clinical history, I will first advert to the symptoms incidental to the acute form, taking this as a type, and then contrast the clinical sketch with that of the chronic or subacute variety. I must, however, premise that whilst typical forms of either variety present manifest differences as to symptoms, course, duration, etc., others, less typical, blend so insensibly as to render it impossible to draw a line of demarcation.

As before stated, measles, variola, the febrile stage of pertussis, acute bronchial catarrh, etc., furnish the antecedents of most cases of acute catarrhal pneumonia. Inasmuch as in all these diseases an acute bronchial catarrh, of the large or small tubes, is a nearly constant accompaniment, it is often difficult, in individual cases, to indicate the precise period of the transfer of the catarrh from the tubes, to the pulmonary alveoles. Notwithstanding the difficulty of determining this point, it is nevertheless possible to surmise, with a reasonable degree of certainty, in the majority of cases, the period at which the pneumonic process commences, especially if careful thermometric observations have been made during the course of the primary malady.

The invasion of catarrhal pneumonia, though not so sharply defined (by a single accentuated chill) as the croupous form, nevertheless presents sufficiently well marked phenomena. So soon as the pneumonic process is superadded to the primary affection, be the same febrile or not, there is a sudden exaltation of temperature. If the primary disease be febrile, the fever is exacerbated. The thermometer attains a high range. The pulse becomes more frequent, the respiration accelerated and embarrassed. The excursions of the thorax are excessive; the alæ nasi are thrown into motion; the auxiliary muscles of respiration are

brought into action; there is inspiratory retraction of the lower end of the sternum, and of the fovea supra sternatis. The face is flushed, and the cheeks, the seat, intense circumscribed redness. The conjunctiva is injected, and the eye sparkling. "The cough, which has up to this time been present, alters its character. When paroxysmal, the paroxysms disappear, to give place to a frequent short cough, which is accompanied by contractions of the face, expressive of pain, or by sorrowful cries." (Ziemssen op. cit., 309.) The alteration in the character of the cough, (not always noted,) with the increase or supervention of fever, are the first signs which attract attention. Vomiting, when the cough continues to occur in paroxysms, is not unfrequently observed. The secretion of the bronchial mucous membrane, heretofore perhaps abundant, is diminished, on the supervention of the alveolar inflammation, or when it continues abundant, with each cough, large bubble rales are heard in the larynx and trachea, appreciable by distant auscultation.

With the increase in the intensity of the fever, the patients become in a high degree restless; this restlessness being, as a general rule, more marked towards evening, and during the early hours of the night. The little sufferers throw themselves about in bed, or demand to be taken up; the bed clothes are thrown off. From time to time they sink into a disturbed sleep, interrupted again and again by the dispnœa and restless tossing about. In very young children this restlessness is of short duration; they soon become somnolent, the surface becomes pale, the cheeks are marked by a circular red or bluish-red spot, contrasting strongly with the pallor of the surrounding skin. The mucous membrane of the lips and mouth present a pale bluish-red color. Everything in the habitus of the patient betrays the existence of insufficient respiration, and commencing carbonic acid narcosis. In cases terminating fatally at this early period of the disease, the principal lesion found is extensive atelectasis, the pneumonic infiltration being found disseminated here and there, in isolated patches, in the collapsed portions of the lungs.

Physical examination of the chest, (in these cases, owing to the tender age of the patients, accomplished with unusual difficulty,) betrays, in the first twenty-four or forty-eight hours, only the signs of extensive capillary bronchitis, except in those rare cases in which there is developed a slight dampening of the percussion tone, due to extensive collapse of lung tissue. This modification of the percussion tone is most marked in the interscapular regions, on one or both sides of the vertebral column, and later in that portion of the lung covering the heart. Auscultation reveals, in the atelectic parts of the lung, extinction of the vesicular breathing, and indistinct subcrepetant rales, due to the coexisting bronchial catarrh.

In thirty-six or forty-eight hours after the commencement of

the disease, it is possible, in some cases, to discover, by physical examination, the signs of pneumonic infiltration in the collapsed lobules. In the posterior inferior portion of one or both lungs, the dullness of the percussion tone is more marked, the vocal fremitus is intensified, bronchophony and bronchial breathing (conducted), crepitating rales, etc., may be heard. "The consolidation, says Ziemssen, (op. cit., 310,) mounts now, provided life is preserved long enough, slowly to the level of the spine of the scapula, or to the apices of the lungs; seldom, however, equally (when the disease is bilateral) on both sides. Either the consolidation commences on the other side when, in the first affected lung, the infiltration has reached a considerable height, or it extends, when the consolidation occurs contemporaneously, on both sides of the vertebral column, more rapidly on one side than on the other." In the cases observed by myself I have noted, that only in rare instances are both lungs equally or contemporaneously infiltrated. The consolidation could usually be traced as high as the spine of the scapula, on one side, before the other manifested signs of pneumonic infiltration. The extension of consolidation beyond the apices, to the anterior surface, or laterally and anteriorly, so as to involve both lower lobes throughout the whole extent, as well as the middle lobe (left), I have never had an opportunity of observing. Such extension has however been observed by Ziemssen, Steffen, and others. In the majority of my cases, the consolidation, after mounting as high as the spine of the scapula, ceased to extend. After remaining stationary a day or so, signs of resolution were manifested in the portions of the lung first involved in the infiltration. All of my cases were in children between one and a half and two years of age, and all terminated favorably, except those worn down by diarrhœa, etc., incidental to first dentition. All occurred in private practice, among people in easy or comfortable circumstances.

The duration of the acute form of catarrhal pneumonia is usually short. The favorable or unfavorable termination takes place within from four to seven days. The most rapid course is observed in weakly children, during the first years of life, especially when the lung affection has been preceded by febrile diseases, such as bronchitis, morbilli, intestinal catarrh, febrile dentition, etc. In relation to a case reported by Bartels, which terminated fatally in twenty-four hours, with all the signs of carbonic acid narcosis, Ziemssen remarks, "that extensive and rapidly developed atelectasis, rather than the pneumonic process, was the cause of the fatal result." Both Steffen and Ziemssen concur that "the duration of catarrhal pneumonia, even in its most rapid course, covers a period of several days."

Older children, and those not reduced by antecedent, protracted febrile affections, or in whom the lung disease is not

coincident or consecutive to acute infectious maladies, such as morbilli, variola, etc., resist for a longer period the effects of catarrhal pneumonia. "Even in these cases, the intense fever consumes the strength, especially when the course of the pneumonia is protracted; less rapidly because the calibre of the bronchi is greater, proportionally, than in sucklings, and are not so easily obstructed; the expectoration is more energetic; the action of the respiratory muscles is more powerful, and, although the inflammation is not curtailed, the ominous atelectasis is more limited; consequently, one of the conditions menacing life is for a much longer period postponed." (Ziemssen, op. cit., 312.)

In those cases in which the antecedent capillary bronchitis is extensive; the inflammation has been of high grade, the fever being manifested by an inordinately high temperature, and especially when the pneumonia is the sequel of an acute infectious disease, we observe early the signs of defective or insufficient respiration, causing the gradual invasion of general paralysis, due to poisoning of the blood by retained carbonic acid. The restlessness of the patient is intense; the dispnœa in a high degree distressing. The flushing of the face and the redness of the general surface gives place to a death-like pallor. The lips and visible mucous membranes assume a pale livid hue. The circumscribed redness of the cheeks gives place to dusky hue. The nervous system soon exhibits the paralyzing influence of retained carbonic acid. The sufferer becomes quiet, apathetic and somnolent. The respiration is more and more superficial; a few deep inspirations are followed by irregular, jerking, sobbing movements. The cough is feeble and aphonic; the secretions, owing to paralysis of the bronchial muscles, cannot be removed from the tubes; tracheal rules betray the danger of the patient. Emetics, imperatively demanded by the condition of the patient, often fail of effect. If vomiting is induced by their action, the effect is almost miraculous. The bronchial tubes are emptied, deep inspirations follow, and the little sufferer is temporarily, as it were, recalled to life. Other remedies, of a stimulating character, often strikingly improve the condition of the patient. Unfortunately, in many cases, the improvement is only temporary. "The dispnœa recurs; the eyes again become dull and heavy; the sensorium obtuse; the respiration more labored and superficial; the tracheal rules, the paleness of the face, the livid coloration of the mucous membranes return. Complete coma, panting respiration, automatic movements, grinding of the teeth, convulsions, close the scene.

Such is a general clinical sketch of the acute form of catarrhal pneumonia, as presented in those cases developed, without being preceded by atelectasis, or in which the collapse of the lung plays a subordinate role. Certain symptoms, however, demand spe-

cial notice, inasmuch as they present certain analogies with those of croupous pneumonia. Careful study, however, betrays differences important to note, inasmuch a careless analysis, has induced able authority to deny, that catarrhal pneumonia exists as a form of disease, distinct from the croupous variety on one hand, capillary bronchitis on the other.

The first symptom demanding attention is the character and course of the accompanying fever. The observations of Ziemssen (op. cit.) and Kraebler (Klinische Beobachtungen über die Masern ŭ ihre Complicationen) have elucidated this point. The fever, characterized by exaltation of temperature, increased frequency of the pulse, and of the respiration, manifests itself, or if already present, increases, at the very beginning of the pneumonic process, before the physical signs of consolidation of the pulmonary parenchymu can be perceived. *The initial chill, so characteristic of the invasion of croupous pneumonia is wanting.* The temperature early reaches 102.2° F.—105.8° F. (39°—41° C.) and remains nearly stationary for several days, with slight morning remissions, or the range exhibits variations, with evening remissions and morning rise, independent of any change in the local process. (Steffen op. cit. I., 283.) With the elevation of temperature, the frequency of the pulse is greatly increased (170–180), together with the respiratory movements. The rapidity of the respiration is something remarkable, not unfrequently reaching sixty or eighty per minute, and according to Bednar, in the first year of life, occasionally 170.

After the fever, with its accompanying phenomena, has continued for some days (two or five), the first signs of consolidation in the lungs may be discovered by physical examination. In regard to the duration of the fever, it may be said to have no certain period for defevescence. Usually, after continuing for nine or twelve days at pretty high point, it terminates gradually, (without any regard to critical days, fifth, seventh, ninth, etc., as so constantly observed in the course of the fever of croupous pneumonia,) with considerable variations throughout several days. The temperature sinks to the normal, or below, without the manifestation of critical phenomena. Nor does the frequency of the pulse and respiration fall in proportion to the diminution of the fever, but remain, in many cases, above the normal for a considerable time, or until the alterations impressed upon the lungs by the pneumonic process are entirely removed, and the organs restored to their integrity. In some cases the respiration remains permanently accelerated, accompanied by exalted temperature, with evening exacerbation and profuse night sweats, indicating the termination of the catarrhal pneumonia in tubercular infiltration, the so-called "phthisis simplex infantum."

It will be thus perceived that the acute form of catarrhal pneumonia differs in this particular from the croupous variety of the

disease, in not presenting the slightest manifestation of a typical course. The reason of this would appear to be, "that in croupous pneumonia the exudation which fills the alveoles is subject to retrogressive metamorphosis within certain fixed periods, when no collateral circumstance prevents, and because the surrounding interstitial tissue, except as regards a greater or less degree of hyperæmia, is not materially altered." On the other hand, in catarrhal pneumonia, the contents of the alveoles are of less moment, but, as remarked by Steffen, (loc. cit. I., 284,) "the disease bears the stamp of a parenchymatous inflammation, which, from many circumstances dependent on the process, can have no typical course."

The further course of the disease, in favorable cases, may be briefly discussed. With the diminution and final disappearance of the fever, the patients become gradually more quiet. Critical discharges (sweats,etc.,) are not observed. Transitory local sweats, in different parts of the body, from time to time, add to the comfortable feeling of the little sufferers. The swollen appearance of the face disappears, together with the lividity of the cheeks and lips. The general surface of the body loses its pallid, shrunken appearance; the cheeks and lips again become faintly rosy. The respiration diminishes gradually in frequency; the alæ nasi cease to move. The cough becomes looser, and without evidence of pain. The expectoration is easier and more abundant, and when seen, as in older children, has a muco-purulent character. "Sputa cocta" are ejected. Gradually the cough lessens in intensity, and occurs only in short paroxysms, at lengthening intervals. When "whooping cough" has been the antecedent affection, the cough, which during the acme of the pneumonia had lost the characteristic "kinks," resumes its paroxysmal type. As the condition improves, the speech becomes freer, the voice clearer and stronger. The apathy gives place to liveliness and interest in surroundings. The sleep, heretofore restless and disturbed by dreams, becomes quiet and refreshing, the naps being often of long duration. The tongue cleans, the appetite gradually returns, the thirst is null. The bowels become regular; the diarrhœa observed in many cases, due to catarrh from passive hyperæmia of the intestinal mucous membrane, disappears with the restoration of the pulmonary circulation to its normal condition.

Coincidently with the improvement of the general symptoms, the physical signs are modified, not, however, keeping pace with the decline of the fever. As the respiration becomes more quiet, the auxiliary muscles are not so actively employed. The inspiratory retraction of the epigastrium disappears. The bulging of the upper portion of the thorax, corresponding to the emphysematous parts of the lungs, diminishes. The respiratory movements return to the norm. The consolidation begins to be re-

moved, but never is this removal accomplished with the same rapidity as the exudation incidental to croupous pneumonia. Gradually the dull percussion tone over the consolidated portions disappears, following the course, as regards order of time, pursued during the development of the infiltration. The percussion tone passes from the dull to dampened tympanitic, to tympanitic, and gradually to the normal clear lung tone. The vocal fremitus loses its abnormal intensity. Conducted rales cease to be heard, on auscultation, as the percussion tone indicates the removal of the infiltration. On the contrary, large bubble rales are generally heard over the affected parts for some time after the percussion tone has returned to the normal. By the time these modifications of the physical signs are brought about, the patients have fully entered upon convalescence.

The duration of acute catarrhal pneumonia up to the establishment of convalescence, varies in different cases. In mild cases six or seven days suffice for the disease to run its course to a favorable termination. Such rapidity of course is generally only observed in those cases which are developed without antecedent atelectasis, being the result of simple extension, of a catarrhal process, from the bronchioles to the pulmonary air cells. In all cases in which there is antecedent atelectasis, the course is more protracted, notwithstanding it may be very acute atthe acme of the disease. My own observations would lead me to give fourteen or twenty-eight days as the usual duration of acute catarrhal pneumonia. In not a few cases the disease seems to be long drawn out, by frequently recurring recrudescences of the pneumonic process, in fresh portions of the lungs. As a consequence of these recrudescences, the convalescence is often slow and wearisome. In all cases, much time is required before the exhausted strength is restored, and the emaciated bodies of the little patients recover their original plumpness. In some cases an obstinate chronic catarrh of the large bronchi for a long time prevents complete restoration to health.

In the cases having a fatal termination, death may occur in consequence, first, of the long continuance and intensity of the fever, leading sooner or later to general paralysis, collapse, etc. It is hardly necessary to remark that the danger of death from intensity of fever is greater the younger the child. Second. By poisoning of the blood by the retention of carbonic acid. The rapidity with which the blood becomes surcharged with carbonic acid depends evidently on the extent of the consolidation of the lung, of the atelectasis, and the collateral fluxion to those portions of lungs uninvolved in the pneumonic process, the atelectasis, etc. When a large extent of one or both lungs becomes rapidly atelectic or consolidated, the respiratory surface is notably diminished, and we have induced all the symptoms of acute poisoning by carbonic acid, acute asphyxia. When the respira-

tory surface is more slowly diminished, the blood is less rapidly surcharged, and the organism, for a longer time, tolerates the presence of the noxious gas. Death occurs in these cases, from the gradual development of general paralysis. The symptoms of blood poisoning under these circumstances are progressive diminution of activity of the heart, sinking of the temperature of the body, paleness of the surface, especially of the face, lividity of the lips and visible mucous membranes, somnolence, apathy; occasionally interrupted by paroxysms of intense agitation, restlessness, etc. Death may occur suddenly or after protracted agony. Third. From hyperæmia and its results, either in the portions of the lungs uninvolved in the pneumonic process, by collateral fluxion and œdema, or in other organs, especially the brain, in consequence of stasis in the cerebral veins, dependent upon impediment to the circulation through the lungs. On the surface of the body, stasis in the veins is indicated by lividity and swelling of the face, by distension of the superficial veins (jugular), and occasionally by œdema of the hands and feet. "From the intensity of these phenomena we may judge of the degree of hyperæmia of the organs within the body." (Steffen.) The result of hyperæmia of the lung is to lessen the already diminished respiratory surface, caused by the pneumonic process. When hyperæmia, from collateral fluxion, is superadded, the tendency to which is notably increased by extension of the pneumonic process, or atelectasis, the tension of the blood in the pulmonary capillaries becomes so great that they exude a portion of the serum into the alveoles and interstitial connective tissue, causing the development of extensive pulmonary œdema, which rapidly destroys life.

Stasis in the cerebral veins is indicated by apathy, somnolence, and in very young children by bulging and tension of the anterior fontanelle, and occasionally by pulsation. In other cases, in consequence of the over distension of the small vessels, effusion into the brain takes place, by which the small arteries are so compressed as to offer a material obstacle to the supply of arterial blood, inducing an anæmic condition of the brain, evidenced by eclamptic seizures, in the midst of which the patient dies. (Traube.)

The subacute or chronic form of catarrhal pneumonia, as already indicated, is, with few exceptions, preceded by atelectasis. The constant presence of the lung collapse, observed at the autopsies of children dying before the development of the pneumonic process, has led to much confusion, and for a long time prevented the true relation of the pneumonia to the atelectasis from being discovered.

Chronic catarrhal pneumonia is rarely observed during the course of, or as a sequel of, the acute exanthemata, morbilli, scar-

latina, variola, but is generally a sequel of pertussis, chronic bronchial catarrh, capillary bronchitis and rachitis.

The invasion of this form of the disease is not often indicated by the presence of typical signs. When the commencement of the disease is marked by characteristic phenomena, these are not materially different from those of the acute form, being only not so violent or intense. If the primary malady was of febrile character, and the fever had subsided; with the commencement of the pneumonia the fever returns, or in case the primary fever was not extinct, the invasion of the new disease is indicated by a rise in the temperature of the body. In other cases, especially in reduced and debilitated subjects, the commencement of the pneumonic process is marked by the development of no special general symptoms. In ordinary cases we notice the gradual development of fever, or an increase of that already existing. Coincidently there is usually a change in the character of the cough, which ceases to recur in paroxysms, as in the primary bronchial affection, but becomes constant, short, and is attended with expression of pain. A physical examination of the chest frequently reveals considerable consolidation of lung in the posterior inferior regions, no indication of which has been manifested by any change in the general condition of the patient. In certain cases, when the sufferers have been inordinately reduced by defective nourishment, or debilitated by antecedent disease, the development and course of chronic catarrhal pneumonia are betrayed by no independent functional disturbances, and even a physical examination gives no positive result.

In most cases of chronic catarrhal pneumonia, which, as a general rule, are the result of chronic bronchial catarrh, bronchiolitis, etc., the fever is of moderate intensity. The consolidation of the lungs is slowly developed, and in favorable cases as slowly retrogrades, with gradual sinking of the temperature of the body, diminution of the frequency of the pulse and respiration. The duration of this form of disease is very variable; that of the inflammation and accompanying fever ranges from eight days to eight weeks. (Ziemssen.)

Contrasting most markedly with the acute form of catarrhal pneumonia, *i. e.*, the pneumonia of measles, variola, etc., we observe those forms of the affection having the most chronic course, viz: such as result from pertussis after passing through the febrile stage. In these cases the antecedent atelectasis, the slow development of the pneumonic process, *i. e.*, the infiltration of the alveoles, the chronic vesicular emphysema of the upper lobes, which is nearly always present, but has no essential connection with the disease in question, the emaciation, etc., offer a clinical picture differing essentially from that of the acute variety. (Ziemssen.)

In this essentially chronic form of catarrhal pneumonia, atelectasis of the posterior inferior portions of the lower lobes, is in almost all cases an antecedent of the pneumonic process. The whooping cough, from which most of the patients have suffered, perhaps for weeks or months, and in the intervals of the "kinks" enjoyed comparative comfort, now undergoes a change. The children become somewhat short breathed, and the cyanotic coloration of the face and general surface, heretofore only observed during the convulsive paroxysms of cough, now persists during the intervals.

With the commencement of inflammatory process in the lungs, fever of moderate intensity is developed. The cough loses its distinct paroxysmal character, becomes more frequent and shorter. The expectoration is diminished. The mucous rales, which were heretofore present only immediately before or during the "kinks," now become permanent. The child is feverish and restless by night, apathetic, and not easily amused by day. The appetite fails, and the bowels are deranged, being either constipated or affected by obstinate diarrhœa. As the inflammation progresses, the fever and dispnœa increase; progressively the weakness and emaciation augment. The face appears collapsed and wizened; the visible mucous membranes assume a more livid hue (cyanosis); the skin is pale and sallow; the epidermis peels off, boils and pustules of ecthyma not unfrequently appear on different parts of the body, especially on the buttocks, back and face, significant of perverted nutrition of the skin. By scratching and picking, these eruptions are not unfrequently converted into obstinate excoriations and ulcerations, especially about the nose and mouth.

Whilst the appetite remains bad, notwithstanding our best therapeutic measures to better this condition, the emaciation and loss of strength progresses. The subcutaneous adipose tissue is entirely removed in two or three weeks, if life last so long; the muscles are reduced to relaxed attenuated strings, the skin hangs about the limbs in loose, flabby folds, and the joints appear as deformed projections. The weight of the body becomes so reduced that it is by no means uncommon to see such patients carried about in the arms of much younger children. Sometimes bedsores are developed over the sacrum. The energy of the heart becomes more and more reduced, the small weak pulse can scarcely be felt, and the patients die during a paroxysm of cough, or perish perfectly marantic. Such is a general outline of the symptoms of this fearful malady as delineated by the master hand of Ziemssen. (Op. cit. 326, et seq.) Cases presenting the above characters have never come under my observation, in private practice. Several are however recorded in the above cited work. Among others, that of a boy (Lange) who was attacked with whooping cough in the beginning of January, con-

tracted catarrhal pneumonia in the beginning of the following May, and died on the 19th of June, in the extremest state of marasmus, after an uninterrupted continuance of the fever for eight weeks, notwithstanding all therapeutical effort to mitigate the intensity of the symptoms.

(*To be continued.*)

ART. III.—*A Few Hints on the Pathology of Dyspepsia and the Modus Operandi of Certain Remedial Agents.* By JOHN M. TURNER, M. D., of Dunbarton, Barnwell County, S. C.

The true pathology of dyspepsia, we believe, to consist in atony of that portion of the nervous system that supplies the stomach and digestive apparatus; the deficiency of the healthy secretion of the gastric liquor, together with the costiveness that ensues, or the want of tone in the peristaltic action of the muscular fibres of the stomach and chylopoetic viscera, are both dependent on the want of tone in the nervous system. Hence, in our prescriptions, we direct our remedial application especially in such a manner as we think will strengthen and invigorate the nervous centres. We hold, then, the theory that the immediate cause of dyspepsia (proper) consists in a vitiated or deficient secretion of gastric juice, and irregular or deficient action in the muscular coat of the stomach and digestive organs, and these we think dependent on the immediate influence of the nervous power. "Accordingly such things as are calculated to cause indigestion, do so by interrupting or weakening the regular supply of nervous influence to the stomach and digestive organs, or by irritating the nervous extremities of the mucous membrane of the stomach and digestive organs." This brings us to that point where we are privileged to enquire into the modus operandi of remedial agents.

And first of Pepsine. We notice this article first, as it is highly extolled, and, like many new remedies, held up almost as a specific for dyspepsia. When its physiological action is critically examined, we judge it to be truly uncertain, or if productive of any benefit whatever, this must be temporary and evanescent. Physiologists have by reason of chemical analysis determined that the gastric juice of the stomach contains an active animal principle, called "*Pepsin.*" This principle can be extracted from gastric mucous membrane of an animal recently killed, and naturally it may be prescribed as a remedial agent in cases of impaired digestion from a deficient secretion of gastric juice, or from an unhealthy condition of that fluid. A recent writer in the *Richmond and Louisville Medical Journal*, March number, 1870, (Dr. Joynes, Professor of Physiology in the Richmond

Medical College,) has published the result of some experiments made with this article, to find out its true virtues as a remedial agent in dyspepsia, and he says: "Its employment is sometimes beneficial, as appears to be sufficiently well proved by the experience of careful and judicious observers, but its *frequent failures is a fact equally well established.*" This is the conclusion of Dr. Joynes, who has given to us, in the same *Journal*, no less than seven different experiments with different preparations of Pepsine.

Now we are not of those disposed to take up with every new remedy that may be published to professional notice, to the neglect of those that have been tested for nearly half a century. Though we are aware that the present is an age of improvement, and that even in our day the science of medicine has made many rapid strides, and we insist that every member of the profession should keep pace with such improvements. If Pepsine is the active principle of the gastric juice, and we know or believe this secretion to be deficient or unhealthy, Pepsine may at times be deemed a very judicious and physiological prescription. But let us look into this matter a little further. The pure gastric juice of a man, an omnivorous animal, is decidedly an acid fluid, containing hydro-chloric or lactic acid, or both, in such a state of amalgamation or mixture that does not prevent the manifestation of their acid properties on animal matter, or on the animal economy. Now chemical analysis has determined that *pure* Pepsine contains no acid in its composition; and, moreover, "that pure Pepsine, in solution in water, without an addition of an acid, is *entirely powerless* as a solvent of meat, albumen, or any other substances of the albuminous or proteinaceous class, upon which the gastric juice, as normally constituted, so readily acts." This is proved in Dr. Joynes's second experiment, and the doctor was led to affirm that "Pepsine was shown to be devoid of digestive powers."

Want of space will not permit of our here reproducing all of Dr. Joynes's experiments. We must refer the reader to the original publication of these.

Some may infer, from the apparent favorable result of experiment No. 1, that the initiatory steps of true healthy digestion was actually produced, because the beef was disintegrated and softened. But let us remember we had the natural gastric juice of the hog, which, perhaps, may be stronger than that of man, and strong hydro-chloric acid, heat 100° F., with *continued stirring in water for three hours;* all of which, combined, we think sufficient to macerate and reduce to pieces a portion of roast beef. Now, suppose we admit for a moment that under the circumstances referred to in this experiment, there resulted something like artificial digestion, is it probable that the various artificial preparations given to the public by the various chemists

and apothecaries are calculated, when given, to produce the same results? Mind, the experimentor does not say that anything like chymification was produced, which we have already stated to be the first step of healthy digestion, and which first step we opine must start from nervous influence. We do know that Pepsine is not a principle of such fixed and definite chemical character, but that it may be subject to some modification, according to the nature and character of the animal from whose stomach it is obtained. Thus, physiology teaches us that the gastric juice from carniverous animals is somewhat different, chemically, from that obtained from herbivorous animals alone, and we lean to the idea that an acid will always be necessary for the article called Pepsine to have any effect in the digestion of animal food; and, furthermore, we would urge that it be obtained from an animal that is omniverous, if we hope for any beneficial effects to ensue. Dr. Joynes, after experimenting with various artificial preparations, offered us by pharmaceutists, says "they do not truly represent the digestive powers of the gastric juice, owing to the want of a due proportion of an *essential ingredient*, in order to give them an activity which is claimed for them;" and he further says, "we must supply this deficiency by prescribing it in conjunction with hydro-chloric acid, or lactic acid, particularly hydro-chloric, on account of its well marked tonic properties." What that due proportion of "*essential ingredient*" is, he does not exactly say, but hints very strongly that it is hydro-chloric acid, and a few lines further on recommends this, "*on account of its well marked tonic properties.*" Now, we know when this acid is given alone it will stimulate the glands and lining membrane of the stomach to a new and tonic action, and thereby impart very often much benefit in some forms of dyspepsia, such as increasing the appetite and regulating the hepatic secretion, and we are inclined to the belief that all the benefit, in general, derived from Pepsine, is owing to the quantity of the above named acid with which it is associated.

We find in the December number, 1872, of the *Richmond and Louisville Medical Journal*, that an acidulated solution of Pepsine is suggested, and recommended as a solvent for false membranes in dyptheria, by Wm. H. Doughty, M. D., Professor of Materia Medica in the Medical College of Georgia. He prescribes it theoretically, on its supposed solvent properties, thinking as it can dissolve, transform, and change animal matter in the stomach, it might be applied steadily in solution, come in contact with this false membrane, and either destroy it or prevent its formation. He says, "what shall we do to dissolve this albuminoid fibrous exudation, called false membrane? Why not apply this artificial gastric juice, and dissolve it there? Is there anything unreasonable in it?" I answer, it appears to me very unreasonable. This artificial membrane is not dead animal mat-

ter, like a piece of beef, put into the stomach, to be digested and formed into chyme, but it is connected to the living tissue by living capillary vessels, that serve as a *vital*, though diseased, bond of union, and which cannot ordinarily be broken, save only by such means as active caustics, which may destroy the vital principle in the membrane itself.

Another reason for my want of confidence in the remedial qualities of Pepsine is, that chemists and apothecaries, for pecuniary gain, have put forth so many different preparations, each recommending his own as the best, and lauding it, too, in so many different diseases; while we know these must differ, too, in essential properties, according to the source from whence the Pepsine was obtained. Again, the article may be impaired in the process of preparation, or its qualities lost to some extent by keeping. Like nitrogenized animal substances generally, Pepsine is readily susceptible of change, and there is no doubt that where freshly and correctly prepared, it will exhibit its inherent remedial properties (if any it ever had) better than after it has been kept on hand a length of time.

In taking a physiological view of the modus operandi of Pepsine, suppose it did give relief in certain cases of dyspepsia by supplying the deficiency or want of the natural secretion of the stomach. It would have to be taken by a patient at every meal, and it would only act during the digestion of said meal. It would not strike at the foundation of the disease. It would not arouse the muscular energies of the stomach to an increased peristaltic action; nor would it excite the secretory powers of the digestive apparatus for the next meal, or the next day, to supply a larger quantity and healthier quality of gastric juice, and thereby fulfil one of the main indications, as pointed out to us, for a correct and permanent remedial management of said disease. In a word, we consider that the effect of this agent must be temporary, and to be at all valuable, it must be combined with hydro-chloric acid. No permanent effect can be produced upon that system of nerves which we believe to be so much deranged in true dyspepsia.

There is some prime cause in dyspeptic affections that renders the gastric juice deficient or morbid, and to make a judicious prescription, the pathological condition must be first looked into and clearly recognized.

We have above contended that this condition consisted in an *atony* or *deficiency* of nervous energy of the stomach and chylopoetic viscera. We think we have remedies at hand, if correctly managed, and assisted by a proper hygiene, that will fulfil the indications. One of these remedies we will now introduce, viz, the Sub-Nitrate of Bismuth. We do not suggest it as a discovery, but from our own experience with it, think it has not been truly appreciated. The utility of this article in certain painful

affections of the stomach has been known to the profession ever since the publication of Odier, of Geneva, "who was among the first to employ it internally." Having used it ourselves, in a practice of near half a century, and having been ourselves for some years a confirmed dyspeptic, and tested its beneficial effects, not only in general practice, but in our own person, we think we can confidently recommend it as a remedy to be relied on in many of the forms of dyspepsia. Professor Wood considers it "both tonic and antispasmodic." "If we endeavor to ascertain," says Trousseau, "the action or modus operandi of Bismuth, we will be much embarrassed." Professor Chapman, in his Therapeutics, says "the action or effect of Sub. Nit. Bismuth on the stomach and digestive organs is a *mild* and *efficient tonic*, and from our own experience," he continues, "we do not hesitate to affirm, with Odier, Marcet, and Moore, that in pyrosis, cardialgia, and gastrodynia, it operates more *speedily* and with *more certainty* than any other article of the materia medica." And it is even now fresh in our memory with what enthusiastic and confidential terms this article was recommended in the various forms of dyspepsia to the medical class of 1838, in the Medical College of the State of South Carolina, by the lamented and much beloved Dickson, who was then Professor of the Institutes and Practice of Medicine. He viewed this article almost as near a specific in dyspepsia, as he did the various preparations of cinchona in intermittent fever. He says, in his Practice, Vol. II., page 26: "I will here recommend the Sub. Nit. Bismuth, which I recognize as a *deobstruent*, a tonic, and a sedative or counter-irritant." "It is," he continues, "more generally adapted to the treatment of dyspepsia than any other remedy, and my own experience enables me to speak with confidence of its utility in five grain dose, *ter in die*."

We believe it acts on that system of nerves that governs the secretion of the gastric juice, and the process of digestion, viz, Chymification and Chylification, and consequently its *modus operandi* is directly to restore healthy action by giving a fresh vigor and tone to the nerves of the part.

But as there are nerves that supply different functions, we opine that Bismuth acts only on that set of nerves that control the secretions and other functions above named. We are in want of some associate stimulant or tonic to the nerves that supply the muscular coat of the stomach and intestine, so as to preserve a regular peristaltic action of thisportion of the chylopoetic viscera which we find deficient or tardy, as is evidenced by costiveness and other symptoms of sluggish movements of these organs. This remedy we find in the extract of Nux Vomica. This is a remedy for dyspepsia we do not generally find recommended by most of American teachers of the present day, but from its reputed efficacy in neuralgic affections, where there existed an

atony or want of sensibility of the nervous tissue, we have thought it would be peculiarly applicable to such conditions of the *primæ viæ*. Its well known effects in exalting muscular action suggests it as the peculiar remedy to act on the muscular coat of the digestive apparatus in cases of tardy movements, capable of arousing the *vis vitæ*, or tardy nervine power attendant upon perfect digestion, to a new and normal condition. On referring to Dunglison, on new remedies, we find Vogt, an Italian physician, gave it in gastralgia; Leegrand in gastralgia; and Russian and Polish physicians administered it advantageously in pyrosis and gastrodynia, especially when these appeared to proceed from an *atony* or *morbid irritability of the nerves of the stomach.*"

The French practitioner, M. Bouet, regarded it as a great adjuvant to catharties or laxatives, and used it with considerable advantage in *habitual costiveness.* Hence we believe that the combination of these two articles of the materia medica, Sub. Nit. Bismuth and the extract of Nux Vomica, along with a proper hygienic course, can be made to fulfil the indications required better than any other, known prescription or compound. The following is with us a favorite prescription:

℞. Sub. Nit. Bismuth.....ʒi.
Ext. Nucis Vomicæ.....gr. iii.

Make pills No. 12, and direct one pill morning, noon and night, one hour before eating.

Should constipation not be relieved, and bowels moved once per day, a mustard plaster must be placed over the dorsal vertebrae, which we find frequently tender, to arouse the latent energies of the nerves that supply the digestive organs. And to the above pill we add, as often as occasion requires, a few grains of blue mass, or rhubarb and carb. soda. It must here be premised that no plan has ever been known to avail much in dyspepsia, without observing very strict rules in reference to diet and general hygienic management.

Before closing these desultory remarks we would observe that a regular, though circumscribed quantity of alcoholic drink daily has proved in our hands a great adjuvant to the above plan of treatment, say one or two tablespoonsful of good brandy or old whiskey, or a teaspoonful of tincture of cayenne pepper, taken without dilution, directly after each meal. These, we surmise, act as a temporary stimulant to the nerves of the digestive organs. We would insist, too, that certain rules in reference to physical and mental hygiene should be observed and strictly followed. The patient should have a regular time to take his meals, and these must consist of articles of a digestible nature, in *certain quantities.* We have found rye-mush, and sweet milk, to agree with dyspeptics more than any other one article; Graham

bread, and ash hoecake baked brown; Irish potatoes, etc., etc. But as to the kind and quantity of food, each one ought to consult his feelings after a meal; and thus learn what *articles* and what *quantity* he ought to eat. The sufferer's mind, too, should be kept in a state of equilibrium; he must avoid causes too exciting, or too depressing. If the individual has been a hard student, let him in part forsake his books for a time, and take free exercise in the open air, with jovial and pleasant company. If an attentive business man, let him curtail his business, and visit some watering-place, where his mind can be diverted from the long accustomed channel of thought that has been wearing down and debilitating his *nerve power*. The metaphysical and physical treatment should go hand in hand.

One peculiar condition belonging to the confirmed dyspeptic, which is very distressing, and which demands immediate relief, is called by patients "cramp colic," or "spasm of the stomach," but which we recognize as gastrodynia. The pain is not confined to the stomach alone, but starts opposite the sternum, and shoots through to the back, and between the shoulders, and is accompanied by much anxiety and restlessness. Watson, in his lectures on the Practice of Physic, says: "I suspect this pain is sometimes neuralgic, and is often very intractable." Following the idea of said writer and author, we have believed that the nerves of the digestive apparatus required an active stimulant and anodyne to relieve the distressing pain, and have for many years used with success the following preparation:

FOR GASTRALGIA.

℞. Chloric Ether.....℥ss.
Bicarb Soda.....℥i. ss.
Morphine.....gr. iii.
Camphor Water.....℥iv.

Dose a tablespoonful, one, two, or three hours apart, until relief is obtained.

We have always found the second or third dose to give relief.

ART. IV.—*Fracture of the Inferior Maxillary and Amaurosis of the Left Eye, Result of Direct Blows.* By J. P. WALL, M. D., Tampa, Florida.

K., colored, aged twenty-four, was struck by some part of the machinery of a saw mill, on the chin and left side of the head, on July 12th, 1873. Some thirty hours after the receipt of the injury I saw the patient, and found him suffering with a fracture through the body of the inferior maxillary, between the right middle and lateral incisors, attended with considerable displacement of the right fragment downwards and inwards.

At the junction of the left superciliary and temporal ridges of the frontal bone, a severe blow had been received, dividing the skin, extending half an inch along the temporal ridge, and causing such tense œdema of the upper lid that it could only be slightly raised for the examination of the eye. The eyeball appeared natural, save some slight congestion of the conjunctiva.

The pulse was sixty, and full; the mind sufficiently clear to enable the patient to comprehend necessary directions, although I learned that for some time after the injury he remained insensible, and had profuse epistaxis. Suffice it to say that subsequently no symptoms of cerebral lesion were manifested. During the night of the 19th of July he had another copious epistaxis; afterwards nothing noteworthy occurred.

A few days were permitted to elapse to allow the swelling of the face to somewhat subside, before any permanent apparatus was essayed to keep the fragments of the broken jaw in apposition. Neither having on hand, nor being able to procure, any gutta percha, to use, as recommended by Professor F. H. Hamilton, of New York, I first tried uniting the adjoining teeth with silver wire, but this proving insufficient, I used a piece of watch spring, externally, to the dental arch, securing it to a sufficient number of teeth on each side of the line of fracture, with silver wire. This overcame the inward displacement, while Barton's bandage was firmly applied to keep the jaws closed. From fault of the patient, however, in removing the apparatus, the fracture was allowed to unite with some displacement inwards of the right fragment, though evenness of the dental border was secured. Nearly four weeks after the injury an abscess, the result, doubtless, of a small splinter of bone having become separated at the time of injury, formed under the chin, and was opened.

It is, however, the amaurotic condition of the left eye which gives the case its peculiar interest. At no time did the patient complain of any pain in the eye, and as the œdema of the upper lid subsided, and when the patient was able to open the eye, he discovered that he could not see with it. On examining the eye, in a good light, nothing abnormal was observed; the pupil was, however, insensible to light, though neither contracted nor dilated. On a *direct* ophthalmoscopic examination, with Liebreich's ophthalmoscope, I was surprised as much at the distinctness with which the fundus of the eye could be seen as at not finding some hemorrhagic effusion into the posterior chamber of the eye. The retina, throughout its extent, presented a pale pinkish appearance, with the blood-vessels well defined, except at the entrance of the optic nerve, which spot was of a bright metallic lustre, and here the central artery of the retina could be plainly seen to issue. All these parts were most distinctly visible, with no bulgings, roughness or floating bodies within the hyaloid body. Subsequently I examined the eye on several dif-

ferent occasions, with the ophthalmoscope, with and without dilatation of the pupil by atropine, and was unable to discover anything otherwise than detailed above. My last examination was made on the 18th of August, nearly a month from the first, and no change was noticeable in the appearance of the fundus or the transparent media. The retina was so thoroughly paralyzed that the use of the ophthalmoscope occasioned not the slightest pain or inconvenience, no matter how long the *séance.* The wound at the left extremity of the eyebrow healed by granulation in the course of a few weeks, though the eyelid remains swollen and drooping. At no time was there any symptom of intracranial lesion, if the epistaxis is excepted, which, however, it is not probable, resulted from fracture of the base of the cranium.

REMARKS.

In looking up the literature of "injuries of the face affecting the sight," I notice that Professor Middleton Michel, of Charleston, S. C., details a very similar case in his contributions, to the April number of this *Journal*, "On Gunshot Wounds of the Face." I allude to case five, where the wound was inflicted by a piece of shell, "over the left superciliary ridge and eyelid." In this case, he says, there were dilatation of the pupil and amaurosis. "There had been no fracture of the frontal bone, no inflammation of the eye, no intra-ocular hemorrhage, no inflammatory congestion of the side of the head or circumorbital region, there was no traumatic cataract, and the motions of the eye were perfect." It appears, however, that no ophthalmoscopic examination of the eye was made within a short time after the receipt of the wound.

Professor Gross mentions two examples where amaurosis "was the result of a slightly contused and lacerated wound of the eyebrow, apparently implicating the supra-orbital nerve."

Mackenzie, in speaking of wounds of the branches of the fifth nerve, under the head of "Wounds of the Eyebrow and Eyelids," says: "Weakness of sight, or even loss of vision, is another consequence apparently arising from even trifling injuries of the eyebrows and eyelids, which has attracted much attention."

"Vic d'Azyr had recourse to experiment. He laid bare, in a variety of animals, the frontal and superciliary branches of the fifth pair; he bruised and tore the exposed nerves, and convinced himself that this was speedily followed by blindness." * * * "My own experience leads me to state that a very considerable proportion of the subjects of asthenopia and of amaurousis present cicatrices of the eyebrow or its neighborhood; and a suspicion naturally arises, when no other more likely cause is detected, that these affections of sight have originated in injuries of the branches of the fifth pair. * * * * * In all such cases I should suspect that injury of the branches of the fifth nerve,

having communicated irritation to the nervous centres, a reflex disease, probably inflammatory, was propagated from them to the optic nerve, and to the other nerves concerned in the function of vision."

In the case I have reported the ophthalmoscope reveals no traumatic changes in the retina, as might be supposed would result from concussion of the eyeball from a direct blow; nor does the optic disc present any of those appearances indicative of neuritis, or of intra-cranial inflammation or tumor. From the history of this case, it would appear, then, that paralysis of the retina, independent of inflammatory or traumatic lesion, may follow injury to the branches of the ophthalmic branch of the fifth pair, and it is highly probable that this is a reflex result through the lenticular ganglion.

I regret that the patient would not submit to the treatment recommended by Bær, viz, the division of the implicated branch of the nerve in the line of, or near the cicatrix. Possibly he may come under observation again, at some future day, when, if deemed of sufficient importance, a sequel to this interesting case may be furnished.

ART. V.—*Surgery in Country Practice.* By T. S. MIMS, of Mobley's Pond, Screven County, Ga.

As physicians frequently commence practice without being properly prepared with instruments, etc., the following cases may not prove uninteresting to the younger members of the profession:

Case I.—April 2d, 1848, called, in haste, by my friend, Dr. Robert H. Saxon, formerly of South Carolina, (now of this State,) to see Stepney, a stout, athletic negro man, about thirty-five years of age, who, about one o'clock P. M., in lifting his gun from a carriage, where he had placed it to go in for his dinner, he being engaged in shooting birds during the morning with a double-barrel shot gun, struck one of the hammers against the back part of the carriage seat, when it exploded, the load entering the chest, about half way between the right nipple and upper end of the sternum. The hemorrhage was profuse. To use the language of Dr. Saxon, "I thought he would die in ten minutes from loss of blood." Syncope came on, and in that condition patient was carried to his house, a distance of one hundred yards, and placed in bed. Immediately a messenger was dispatched for Dr. K. W. Lovett and myself, distant fourteen miles. We arrived about seven o'clock; found him with quick pulse and respiration nearly natural. As the immediate danger seemed to be from hemorrhage, we advised that he should be kept quiet, by

administering opiates, if necessary, and that we would return the next day. April 3d, 11 A. M., found Stepney still quiet; the compress and bandage, which had been applied by Dr. S., immediately after the accident, still in *situ.* After waiting three or four hours, we proceeded to examine the wound, its course, etc. On turning him over we discovered a projection at the lower end of the scapula. By pressing the projected part, we could distinctly hear a crepitating sound, as if something rough was immediately under the skin. After consultation, I proceeded to make an incision, with a common pocket case bestoury, when, to our astonishment, we found a mass of corn shucks with which the gun had been wadded. This we removed, together with two hundred and twenty-three number eight shot. Dressed the wound with compresses and bandage; administered quarter grain Sulph. Morphiæ, and advised that nothing more be done until our return, unless fever should come on; in that event to bleed to syncope.

April 4th, 10 A. M., found Stepney quiet; pulse eighty-one; respiration twenty. Was informed by Dr. S. that about ten or eleven o'clock the night previous fever appeared, when he was bled to the extent directed. In a short time he reacted without any return of fever; cold water dressings applied; suppuration came on; the exposed part of the scapula was soon denuded of its periosteum, and for several days we could see light distinctly through the whole course of the wound. The wound closed up rapidly, and in the course of five or six weeks he was perfectly well, and resumed his usual occupation, as superintendent or driver on the farm.

He is now, 1873, an active and strong man. During the whole course of treatment this patient took nothing internally in the way of medicine, except the morphia, and occasionally a dose of Sulph. Magnesia; his diet was restricted until after the third week.

It is apparent that patient was rescued from immediate death by syncope, which gave time for the natural hæmostatic changes and the final lymphy deposit to take place.

Case II.—September 14th, 1854, about seven o'clock A. M., was sent for by my brother, (the late Dr. B. K. Mims,) to see, with him, Dick, a stout, robust negro, belonging to Colonel A. S. Jones, who was found about eighty or ninety yards from the house he stayed in the night previous, where he was struck, as reported by witnesses, with a common single tree, the iron piece to which the trace fastens having been driven through the right temple, and penetrated at least an inch into the substance of the brain. He was lying on his back, perfectly insensible, with at least a teaspoonful of brain on the ground by the side of his head; pulse forty-eight; respiration fifteen. Examined the seat of injury. Found the skin broken; one and a half inches of the

temporal bone driven tranversely into the substance of the brain. I made a vertical incision, dissected the skin from the bone, and attempted, with a pair of pocket-case forceps, to extract the bone, but without effect, so firmly was it fixed. As we had no trephine, substituted a pair of tooth-forceps for the smaller forceps, and with difficulty removed the bone, which was followed by about a tablespoonful of brain-matter. The edges of the torn meninges presented an uneven appearance; no hemorrhage of any consequence. Drew the wound together by sutures; applied compress and bandage.

Soon after the wound was dressed, Dick stretched his eyes, looked around the room, and said "good morning, doctor."

April 15th. Found him this morning with high fever and raving delirium. Bled to syncope, and applied cold water dressing. These means had the effect of relieving him of fever and delirium; ordered a full dose of Sulp. Magnesia; this to be repeated in four hours, if necessary. The medicine, in due time, had the desired effect.

Cold water dressing, and occasionally a dose of Sulp. Magnesia was all that was done to the end of the case.

The wound healed by first intention. The opening in the temporal bone is now not over half inch diameter. Dick, once the slave, is now a hale, healthy fellow, a good laborer, and glories in his freedom and ability as a suffrage slinger.*

Case III.—August 10th, 1855, received a note from my friend, Dr. E. DeLacy Baker, of Burke County, (now of Eufaula, Ala.,) to see, with him, a negro man (Dick), belonging to Captain W. J. Hankinson, of same County, who had received the contents of a shot gun, the night previous, in his right arm. The load entered the back part of the elbow, and the No. 1, or buckshot, coming in contact with the bones, separated, some coming out at the wrist, and others through the palm of the hand. There was great œdema, near elbow; no pulse at wrist; fingers cold and shriveled; an offensive sanies exuded from the wound.

Here we were twenty-two miles from a case of amputating instruments, the weather exceedingly warm, and no chance but amputation. After consultation, we procured a jack knife, got a carpenter to sharpen it, borrowed a tenant saw, made a tourniquet out of a piece of buck-skin and a small block of wood, which we placed over the artery, and by twisting, instead of screwing, as with the ordinary tourniquet, we controlled the artery. Now we performed the double flap operation, cutting with the jack-knife, sawed through the bone, took up the arteries with a pocket case tenacalum, while Dr. Baker ligated them, drew the wound together with adhesive plaster; applied cold water dressing. Wound healed by first intention. Dick soon got well, and his arm presents as nice a stump as is generally seen.

NOTE.—This case was published soon after it occurred by Dr. B. K. Mims.

ART. VI.—*Continuation of Replies to Observations on Treatment of Yellow Fever, made to* Professor JOS. JONES, M. D., of the University of Louisiana, New Orleans, La.

NEW ORLEANS, July 22, 1873.

PROF. JOSEPH JONES, M. D.,
Medical Department University of Louisiana:

DEAR SIR: In reply to the letter with which you have honored me, and in which you request an expression of my views on the treatment of Yellow Fever, I must candidly confess that my past experience has not been as satisfactory as I could have desired, but *theoretical considerations* lead me to desire, in the future, to make a careful trial of the *alcoholic treatment*, first proposed by Todd in pneumonia.

I am forcibly struck by the *lesions of the heart*, which you have shown, by *careful post mortem* examinations, to be *characteristic* of this disease. (See page eight of your Observations on the Treatment of Yellow Fever.) "Oil and granular albuminoid, or fibroid matter, is deposited within and around the muscular fibrillæ, and the organ, after death, presents a yellow, flabby appearance."

I am so much the more strongly impressed with the truth of your observations upon this anatomical character of Yellow Fever, because, for more than twenty years, all my observations have confirmed me in the belief that its most striking clinical characteristic is the progressive diminution of the pulsations of the heart from the point of the establishment of the initial febrile action.

In an article which will appear in the next number of the *New Orleans Journal of Medicine*, you will observe, that in the first stage of Yellow Fever, whilst the line of the temperature ascends during the first, second, and third days, the line of the pulse, which reaches its highest point during the first hours, begins to descend immediately; so that, as a rule, on the second day, its direction is inverse to that of the temperature; then from the third to the fourth day at the latest, the two lines go down together.

Without neglecting to open the intestines, by gentle purgatives, and also to maintain the functions of the kidneys and skin, I would also be disposed to prescribe for the patient cold lemonade, from the beginning, to which small quantities of wine have been added; and after the febrile action has attained its highest point, as indicated by the thermometer, increasing the quantity of wine, and substituting brandy and gin for the wine, as soon as the pulse shall have fallen to one hundred per minute, especially if this fall in the pulse is also attended with a similar fall in the temperature. After the use of the brandy it might be necessary to return to the wine.

Permit me, as an addendum to these observations, to reproduce some extracts from the clinic of Professor Jaccoud: "As soon as the alcohol is absorbed, it exercises an almost immediate and energetic stimulation on the nervous system; the beatings of the heart also become stronger and more frequent. At times, also, the temperature declines." (Page seventy-three.) "The action of the alcohol is not limited to the dynamic excitation of the nervous system; to this effect is added a material modification of the nutritive combustions. To give alcohol is to come directly to the aid of the patient, who is being consumed by fire; it is to furnish the patient with a combustible aliment capable of being rapidly decomposed; the combustion of which limits necessarily the work of the organism during the febrile excitement. The therapeutic action of alcohol, therefore, is two-fold; it arouses the nervous system and arrests the waste of tissue." (Page seventy-six.)

We must, of course, maintain this indication within wise limits. We should not forget that whilst proposing a plan of treatment, based upon theory, in practice, *it is the patient* whom we must carefully examine, and adopt our treatment to the peculiar constitution and vital endowment, without losing sight of the powers of nature, and the different manifestation of the disease in different epidemics.

During the epidemic of 1847, leeches and blood-letting, even to excess, appeared to be beneficial; in 1853, the purgative medication found more advocates. As a general rule, the majority of practitioners pay the greatest attention to the symptoms, adapting the medication to them.

I hope that the publicity which you propose to give to this letter will induce some of our *confrères* to employ, in future, *alcohol* in the treatment of Yellow Fever. It is my earnest belief that the alcoholic plan of treatment will prove successful.

Receive, very honored *confrère*, the assurance of my high consideration. Respectfully yours,

J. C. FAGET, M. D.

159 *Burgundy Street, New Orleans.*

NEW ORLEANS, July 23, 1873.

PROF. JOSEPH JONES, M. D.:

SIR AND DEAR CONFRÈRE: I thank you for the "Observations on the Treatment of Yellow Fever. I have read your propositions with interest and pleasure, and agree with you upon all the questions upon which you treat. I regret that the demands made upon my time by the practice of my profession, prevents, at this time, a full expression of my views upon the treatment of Yellow Fever; but I will, in a few words, give my mode of viewing this subject. Yellow Fever presents three varieties of cases:

First. The patients in whom the temperature of the fever does not exceed 40° C., (104° D.) All the patients of this class, (unless they are over fifty years of age,) get well, with or without treatment. This is the light form of the disease.

Second. The patients whose temperature exceeds 40° C. (104.5° D.), without attaining 41° C., (105.8° D.) This is a grave form of the disease, which we can often cure by appropriate treatment.

Third. The patients in whom the temperature reaches in the earliest stage of the disease, 41° C., (105.8° D.) All such patients die, according to my observation, whatever may be the plan of treatment adopted.

As I always observe the disease with the thermometer, the first indication is to moderate and diminish the temperature; to reanimate the energy of the heart, and to excite the capillary system. To accomplish these results, I employ Digitalis, Tincture of Veratrum Viride, and Alcohol, administered either singly or combined, according to the nature of the cases. The second indication is to diminish the heat of the fever, by lotions of the whole body, with cool water, to which Vinegar or Tincture of Camphor have been added. My patients are fed from the beginning of the disease with beef tea and generous wines.

As soon as the fever yields, I increase the alimentation, administer tonics, and cease the sedative medication.

These are the great lines of my treatment.

I regret, from lack of time, not to be able to enter into minute details. As soon as am able, I will again recur to this subject, and comply with your wishes.

Receive, sir and dear *confrère*, the expression of my best feelings and sentiments. JNO. TOUATRE.

142 *Dumaire Street.*

NEW ORLEANS, September 11, 1873.

JOSEPH JONES, M. D.:

DEAR SIR: I have experienced great gratification in reading your articles on the "Nature and Treatment of Yellow Fever." They agree with my observations, made in Havana, during a period of ten years. Indeed, Yellow Fever differs in its poison from that which produces the paludal fevers, and quinine is not exactly the remedy. I take the liberty to request you to try the emetic medication, in repeated doses, during the first stage; such treatment has had with me a great success. In the annals of the Academy of Sciences of Havana, you will find very able and original works on the subject. I have not entirely and exclusively devoted myself to the study of this affection, but I have

taken an active part in the discussions held at the Academy of Sciences in Havana, relating to Yellow Fever. I am about to close, requesting you not to abandon, by any means, such an important work. At the same time, I take leave to hint to your keen observation the subject of differential diagnosis between the Hemorrhagic Paludal Fevers, the Bilious Remittent of grave type, which sometimes are hemorrhagic, as also the Yellow Fever, which terminates sometimes without hemorrhage, rarely this symptom determining itself in the first and second stages.

Hoping that you will excuse my delay in answering your letter,

I remain, your friend and colleague,

JEAN C. HAVA, M. D.

97 *Chartres Street, P. O. Box* 1313, *New Orleans.*

NEW ORLEANS, August 1, 1873.

JOSEPH JONES, M. D.:

MY DEAR DOCTOR: Your esteemed favor, with copy of "Observations upon the Treatment of Yellow Fever," was duly received, for which you will please accept my cordial thanks. I have read, with great interest, not only this paper, but also your views on other branches of the subject, which you have kindly sent me; particularly the results of your pathological remarks on Yellow Fever, which, in my estimation, add a most valuable and much needed chapter to our information on this important disease.

I comply somewhat reluctantly with your request to give you an outline of my views on the treatment of Yellow Fever, because my observations and experience have led me to conclusions at variance, in some points, with generally received opinions.

The basis of this difference is in my conviction that the Liver is the organ to whose proper functional action is mainly due a successful and happy issue of the disease; while, at the same time, I do not undervalue the great importance of a proper action of the skin and kidneys, for often do we see lives rescued from death solely by the action of the kidneys, not simply by their performing their own legitimate functions, but by doing at the same time work which the Liver has failed to do, and which they would not have been called upon to perform had the Liver continued to discharge its functions aright.

Therefore, of the three great organs which come to the rescue of the Yellow Fever patient, viz, Liver, Skin, and Kidneys, I place the Liver as first in importance.

Acting upon this belief, and to ensure, as far as practicable, the proper action of this organ, it has been my uniform practice, since 1844, to administer, as early as possible in the attack, and

rarely after twelve hours have elapsed, one large dose of Calomel, which is permitted to remain undisturbed some eight hours, at which time the bowels should be moved by an infusion of Senna and Manna. After this, it is only necessary to keep the bowels in gentle action by effervescent salines, or castor oil, if not contra-indicated. During the febrile stage I order as nourishment some barley water, and later, prefer milk to anything else. The rationale of this treatment, is that rapid and violent purgation, which I think undesirable, is avoided, the Liver and Portal circulation are emulged, and a gentle mercurial excitement is established, which does no possible mischief, disappearing with, but continuing through the attack, and which renders stimulants in the second stage unnecessary.

If this dose of Calomel is given later in the attack, it is apt to act as a purgative, and thus the great object is defeated; if given at the outset, it rarely, if ever, has done so in my experience. The changes in this disease are so rapid and radical, that decided medication is unsafe, and certainly unavailing, after a few hours have been passed. I have observed that Quinine acts better in some epidemics than in others, and with different results during the same epidemic. Thus, in the early part of 1853, it acted well in combination with Calomel; later in the epidemic, I saw bad results, due to it, and discontinued its use. In 1867, we had an epidemic, in which local conjestions were of frequent occurrence, and here Quinine was indispensable.

In an epidemic in Woodville, Miss., in 1844, when I first took an active part in the treatment of Yellow Fever, blood-letting was generally and freely practiced, by venesection and by cups and leeches; and while deprecating the indiscriminate use of this agent, powerful alike for good and evil, my observation of its effects during that epidemic has prevented me from viewing it as a remedy so doubtful or so hazardous, as to merit total abandonment. Early in the epidemic of 1853, I saw a young man, overwhelmed by the intense excitement of his attack, and die in six hours in convulsions. A few minutes later, I saw a lady of delicate physique, six months advanced in pregnancy, laboring under the same intense fever, and threatening symptoms. I lost no time in bleeding her freely upon the arm, and had the pleasure of seeing her make a happy and speedy recovery, and go to her full time. I am sure that she must have died, but for the blood-letting. I present them as examples of the class of cases in which I would resort fearlessly to venesection in Yellow Fever, and in justification of the plea, which I urge in behalf of the lancet in this disease, I know of no other agent capable of controlling the intense and destructive excitement in these overwhelming attacks which we all meet with now and then during our great epidemics. There are many adjuvants of great value in promoting the action of the skin and kidneys, such as spong-

ing with tepid acidulated water, cold water, enemata, etc., etc., but as I cannot attempt, nor do you desire, a minute statement of the treatment of Yellow Fever, I close this brief outline with the hope that it may not be unacceptable.

With much esteem,

Respectfully and truly, your friend,

A. C. HOLT.

Felicity Street, between Prytania and St. Charles.

ART. VII.—*Experiments upon Living Animals with the Blood from the Heart and the Black Vomit from the Stomach of Yellow Fever Cases.* By JOSEPH JONES, M. D., Professor of Chemistry, etc., in the University of Louisiana, New Orleans, La. (Extract of Letter to Editors.)

* * * * * * * * *

Experiment First.—With a small "subcutaneous" syringe, I injected beneath the skin of a healthy puppy about thirty drops of the blood from the Yellow Fever heart.

No ill effects were observed, and the animal is at present strong and active.

Experiment Second.—In like manner, I injected beneath the skin of an active guinea pig about the same quantity of the blood from the Yellow Fever heart.

The next day, October 16th, the guinea pig appeared lively and ate its food. October 17th, the animal appears sluggish, and refuses food. October 18th, animal feeble, moves with difficulty, and is evidently ill from the effects of the injection. October 19th, 5 A. M., I found the guinea pig dead, cold and stiff.

Post Mortem Examination.—Body emits a disagreeable odor. Cellular tissue of skin and surface discolored and greatly congested around the point of the injection of the Yellow Fever blood. Cellular tissue and skin softened in those portions around the area of injection. Under the microscope, the fluid from these portions of the cellular tissue were found to contain numerous bacteria and revolving animalculæ. Cavities of heart distended, with dark, almost black, loosely coagulated blood. Blood changed rapidly to arterial hue, upon exposure to the atmosphere. Under the microscope, the blood corpuscles presented no peculiar alteration. Liver congested. The microscope revealed no accumulation of oil in the textures of the liver. Liver cells distinct, but pale. No bacteria, or vegetable, or animal organisms were observed in the blood of the heart, or in the blood and structures of the liver.

Experiment Third.—Into the subcutaneous tissue of a large healthy and active male guinea pig I injected about thirty drops of the black vomit from the stomach.

The black vomit thus carefully injected into the cellular tissue caused death of this animal in six hours.

Post Mortem Examination.—Diffused redness and great capillary congestion of cellular tissue beneath the skin. Congestion greatest in the immediate vicinity of the injection. Body emits a foul, putrid odor. Immediately around the point where the hollow needle had penetrated, where the black vomit had been injected, dark blood had been effused, and the textures presented precisely the appearance of those wounded and poisoned by the fang of the Rattlesnake or Copperhead.

The cavities of the heart were distended with dark, almost black, loosely coagulated blood. Liver dark slate color, and highly congested. Mucous membrane of stomach congested and punctated. No animalculæ, bacteria, fungi, or algæ, discovered in the blood. Decomposition rapid, and although the animal was examined almost immediately after death, the odor was disagreeable, and resembled that of the black vomit.

Experiment Fourth.—I injected into the subcutaneous tissue of a large healthy guinea pig about thirty drops of black vomit, which I had preserved from a case of Yellow Fever, ejected shortly before death, on the 9th of October.

Death caused by the black vomit in six hours.

Post Mortem Examination.—Results similar in all respects to those recorded in the preceeding experiment; intense congestion of cellular tissue around locality of injection of black vomit; no animalculæ, bacteria, or vegetable organisms in the blood; putrefaction rapid and marked by the foul odor.

Experiment Fifth.—I injected into the subcutaneous tissue of a guinea pig about thirty drops of putrid blood, which I had abstracted from the cavities of the heart of a subject, who had died on the 9th of October, in a "*Congestive*" Malarial Chill.

Death caused by the putrid malarial blood in eight hours.

Post Mortem changes similar to those recorded in experiments third and fourth.

The preceding experiments are of importance in establishing the fact, that *black vomit, taken from the stomach immediately after death, or ejected during life in Yellow Fever, will, when introduced into the subcutaneous tissue, produce as deadly and as speedily fatal results as putrid blood.*

We deduce the following practical conclusions:

First—Black Vomit, *when absorbed into the circulatory system produces a deadly* Septic Poison.

Second—*If the capillaries of the stomach in Yellow Fever are paralyzed, and the epithelium of the mucous membrane destroyed, it is possible that in some cases the absorption of black*

vomit, especially after it has undergone putrefactive changes in the stomach, may be an important cause of the fatal issue.

Third. *If remedies could be used which would prevent putrefactive changes in the black vomit, and render it comparatively inert, a certain proportion of cases might be rescued even after the appearance of black vomit.*

The preceding cases, experiments, and reasoning, led me to determine to employ, in the treatment of Yellow Fever, certain well known antiseptic remedies.

CARBOLIC ACID has been used by myself and others in the treatment of paroxysmal fever; but from its caustic action on mucous membranes, the readiness with which it loses its antiseptic properties by combining with albumen and fats, its nauseous taste, even when freely diluted, and its poisonous effects, when administered in large doses, decided me not to use this agent; but to substitute one of its more stable compounds, which could be administered in large doses, without producing toxic effects, or inducing nausea.

It is well known that the SULPHO-CARBOLATE OF SODIUM may be administered in large doses; and that the Sulphur compound resulting from its decomposition in the system, is eliminated chiefly by the lungs; and I determined to give this remedy a fair trial, as opportunity might offer.

* * * * * * * * *

I have used the Sulpho-Carbolate of Sodium in twelve cases of Yellow Fever, with satisfactory results.*

I find that it is readily borne by the stomach at all stages of the disease; that so far from exciting nausea and vomiting, that it arrests these distressing symptoms, in many cases; that it arrests the decomposition in the black vomit to a certain extent. I hope to present the full results of my experience with the Sulpho-Carbolate of Sodium, in the treatment of Yellow Fever, at some future time.

With high esteem and kind regards, truly yours,

JOSEPH JONES.

NOTE BY EDITORS.—We learn since the receipt of this letter that Professor Jones has continued his experiments with this agent in a very large number of cases, and he thinks with advantage.

We desire in no way to disparage the use of the Sul. Carb. of Sod., but would rather encourage further observations by the profession. We would state, however, that it was liberally used by several members of the profession in this city during our epidemic of 1871. One of the editors of this Journal employed it in over a hundred cases, beginning early in the disease, immediately after a full mercurial dose, and continuing it until the end. The results were only negative; the article was well retained by the stomach, but in comparing the cases so treated with others, where only a simple saline diaphoretic was substituted, no difference could be noticed in the progress of the two classes of cases.

ART. VIII.—*The Natural History and Geographical Limits of Yellow Fever within the United States.* (*A Paper read by* J. M. TONER, M. D., *before American Public Health Association, in the City of New York, November* 12, 1873, *and Illustrated by a Large Map.**)

It is interesting to discover and note all the localities in the United States where Yellow Fever has at any time existed, either as an epidemic or in a sporadic form. The map, which we have the satisfaction to exhibit before this Association, aims to epitomize this data, and to locate and mark each place with a yellow spot.

It is made up from notes taken in the study of the distribution or geography of the diseases of our country. No special opportunities for studying this disease are claimed, nor originality, for the mode in which the facts are presented, although they are believed to be accurate, as far as they go, if we can rely upon current medical literature for the data. Nor is it pretended that this paper is exhaustive; localities not named, no doubt, have been visited by Yellow Fever, but have escaped our search. We are confident that such will be found within the region of its general distribution.

The tables accompanying this paper contain the data from which the map is projected, and give the names of the cities and other localities where this fever has been in our country, with the years and the dates of its appearance and disappearance, etc., arranged by States, in alphabetical order. The elevation above sea level of each locality has been given, as far as possible, from reliable sources. In some instances, the elevation of a place is assumed, from a general knowledge of the altitude of the surrounding country. The errors, if any, however, in this particular, will be unimportant.

For the execution of this large map, which can be seen across the room, I am indebted to the kindness of Willis Drummond, Commissioner of the United States Land office.

This matter of the elevation of localities is the view to which we wish particularly to call attention in the study of the habits of this disease. We are inclined to give much weight to the theory that diseases have geographical areas and limits modified to some extent by topographical and climatic conditions, that determine the types of disease, as do climate and elevation the fauna and flora of a locality.

The fact has always been patent to the profession, that there are parts of the earth in which particular forms of disease occur to the almost exclusion of others. The study of the causes of

*NOTE.—The map has not yet been engraved, but the table of localities, with the assistance of any Map of the United States, will answer the purpose.

this exclusion difference is as important as any that can engage the attention of the physician. As a simple factor, elevation will, we apprehend, be found to possess both preventive and curative qualities, not only in this, but in other diseases.

We shall, in this paper, studiously avoid discussing the questions whether Yellow Fever is a specific disease or not, whether it is always imported, or whether, under certain conditions, it may originate in our own country.

Nor do we aim to speak as an expert, never having seen a case of Yellow Fever, but rather appear as a collator of facts in its history.

At the present time the natural history of disease, if we may use such a term, and the geographical distribution of diseases, is attracting much attention.

There can be but little doubt of the correctness of this position, and that an accurate knowledge of the climatic and other physical peculiarities, and the prevailing meteorological conditions of a region, will greatly aid the physician in preventing sickness and in treating successfully the diseases incident to a locality.

The more exact and extended this information becomes, the more definitely can physicians mark out the boundaries and the distribution of diseases over the globe, and suggest measures of relief.

The chief factors usually and most naturally taken into consideration in the study of the salubrity of a State, or even a city, are latitude, longitude, the extremes of heat and cold, mean animal temperature, the prevailing direction of the winds, the general humidity of the air, and the annual precipitation.

These, undoubtedly, furnish most valuable information, but there is another important element to be considered, that of elevation, which has the power to intensify or counteract the influence of most of them.

The most insalubrious regions, the world over, are confessedly the low tide water lands.

The impression is quite general that persons of the same nationality, living on mountains or high table lands, are, as a general rule, more rugged and healthy than their friends engaged in similar occupations on the low lands in the same latitude.

This map will enable us to readily trace out the low lands in considering the question whether elevation has presented any barrier to the progress of Yellow Fever in the United States.

The conceded home of Yellow Fever is in the West Indies and Bahamas, with a portion of the adjacent Continents of North and South America. A square formed by the forty-fifth and the one hundredth degrees of longitude, and the thirty-fifth North and fifth South latitude, will include the favorite region of this disease.

Although originating nearly every year within the square named, history shows it may prevail on the seacoast in any locality within the tropics, North and South of the Equator, where malarial fevers prevail, and the daily average of the thermometer is over 75° or 80°, with a high dew point for weeks and months together.

If, however, these conditions were all that are necessary to the development of this disease, they exist during parts of the summer, at least, in almost all of our Atlantic cities, as may be seen by reference to the admirable Isothermal Maps in Lorain Blodget's Climatology of the United States.

There are, no doubt, other climatic conditions essential to its origin, if not its propagation and spread. Once the disease has become epidemic in a place, it can exist at a much lower average daily range of the thermometer than is required for its development. It is, however, always controlled in its severity, and checked in its spread, or entirely arrested by storms, heavy rains, and most effectually by frost. This has been exemplified by the polar waves of cold air, or "Northers," that occasionally blow from the Arctic regions, down over Texas.

Yellow Fever does not prevail in the East Indies, nor in China. But, being a portable disease, shipping may carry it to any point in a temperate climate. It has appeared in most of the maritime cities of the United States, on the Atlantic coast, as far as Boston; and, indeed, has been chronicled at Quebec.

While it is true that it has thus visited many of the cities and towns on the coast, it has fortunately never extended far into the interior of our country. It seems almost exclusively to follow the navigable water courses, having their outlet into the Gulf of Mexico, as may be seen by reference to the map or to the table.

Dr. Drake observed that while the disease had appeared at almost every town on the Mississippi, as far up as Vicksburg, that Woodville, twelve miles from the River, was the most remote inland point it had reached. The same accurate observer remarks, that Yellow Fever is eminently a disease of cities, rather than rural districts, and of villages, rather than scattered country dwellings.

It is observed that towns of small population, within the Yellow Fever Zone, are less liable to suffer than larger ones, and the same town, as its population increases, is more likely to suffer in consequence.

Density of population, or proximity of numerous individuals, approaching to crowding, is believed to be a factor of no small influence in the propagation and spread of the disease.

Its appearance in a locality is generally coincident with bilious intermittents, and the first cases are said always to occur near the water, in the lowest and most insalubrious places. Writers have observed that its epidemical course, or limit, coincides with

the range of the growth of the live oak, the cypress, and the long mosses. The Northern limit of the growth of the cypress at the Northeast is about Norfolk, Va.

Certainly, the regions of our country most frequented by this disease are particularly low and flat, with numerous rivers, and much marsh and swamp lands, as is shown by the localities and elevations marked on the map.

And these low lands are, to a considerable extent, covered with the cypress, long leaved pines, and other indigenous trees, with thick undergrowth, when uncultivated and in a natural state.

Yellow Fever, by nearly all writers, has been considered a distinct disease from the autumnal, remittent fevers of the Temperate Zone. All agree that it is indigenous at Vera Cruz, in the Gulf of Mexico.

When the climatic conditions of that locality are examined, nothing special or satisfactory, as an explanation of the peculiarities and origin of the disease in question, has been discovered.

A protracted average high temperature, with humid atmosphere, are, to be sure, constant factors there; but these, of themselves, are deemed insufficient to originate the disease.

The time has, perhaps, not come, if it ever does, for the discovery of all the elements entering into its development.

There are, no doubt, numerous undiscovered factors and conditions essential to its existence, and present, at different seasons, in varying intensity, which greatly add to its mortality; at the same place, during some years this is much greater, when these conditions of heat and moisture are the same.

Again, extreme heat and dryness stop the epidemic, as do heavy and protracted rains.

It is true, as we have already stated, that the conditions of protracted heat, averaging over 75° throughout the twenty-four hours, with great humidity, exist almost constantly during the summer in the Gulf States, and occasionally in the coast cities of our country, as far North as Boston, and yet the latter are rarely ever visited by this disease in an epidemic form.

The conditions of moisture is made manifest by a glance at Chas. A. Schott's "Tables and Results of the Annual Precipitation in Rain and Snow throughout the United States," published in 1872, by the Smithsonian Institution.

The humidity in the atmosphere is relative to the season, and, as you are aware, the absolute humidity is greater in the summer than in the winter, as warm air has a greater capacity than cold air to contain moisture, as the following table, from Professor Guyrt, will show.

This table expresses, in Troy grains, the weight of vapor contained in a cubic foot of saturated air at the temperatures of Fahrenheit given:

Temperature of Air.	Vapor in Grains.	Temperature of Air.	Vapor in Grains.	Temperature of Air.	Vapor in Grains.
0°	0.545	63°	6.361	80°	10.949
5	0.678	64	6.575	81	11.291
10	0.841	65	6.795	82	11.643
20	1.298	66	7.021	83	12.005
30	1.908	67	7.253	84	12.370
32	2.126	68	7.493	85	12.756
40	2.826	69	7.739	86	13.146
45	3.426	70	7.992	87	13.546
50	4.089	71	8.252	88	13.957
55	4.800	72	8.521	89	14.378
56	5.028	73	8.797	90	14.810
57	5.202	74	9.081	91	15.254
58	5.381	75	9.372	92	15.710
59	5.566	76	9.670	93	16.176
60	5.756	77	9.977	94	16.654
61	5.952	78	10.292	95	17.145
62	6.154	79	10.616	96	17.648

To see how far the condition of a higher or more than ordinary average of heat and moisture, either held in suspension or precipitation, may have existed in Memphis and Shreveport during the epidemics of the past summer, we tabulated the returns made upon this point from these places to the United States Signal Bureau for the months of July, August, September, and October, of 1872 and 1873.

The former year having been healthy at these towns, has been taken for the purpose of contrast. The results undoubtedly furnish aids in the study of the nature of the diseases, but the difference is too slight to clear up the mystery of its origin and progress. The tables are lengthy, and are therefore omitted.

We may here remark, that in the study of this disease in the United States, it is in small degree, to man himself, by neglecting the laws governing health, and the sanitary conditions of his abode within the Fever Zone, that we must look for at least some of the causes.

That the disease has limits, varying its boundaries during particular seasons, will be readily conceded. One of the limited causes assigned by all observers is low temperature.

We ask the question, is elevation to be credited as in any degree controlling the spread of Yellow Fever to interior towns; and, if so, does elevation control it in any other mode than by possessing a cooler atmosphere than prevails in the low lands in the same vicinity?

Nothing is truer than that man's health is affected by his surroundings. Where the conditions exist for a rapid vegetable growth, and rapid decay, as in the tropical and semi-tropical regions, such localities must always have conditions liable to excite diseases, peculiar to themselves, and which exercise a powerful influence over man's vigor, both in health and in disease, although these conditions and their modes of action may escape our observation.

It had long since been noticed, by Humboldt, that this fever did not exist at high altitudes.

A. Keith Johnson, in his admirable Physical Atlas, says: "At Xalapa, in Mexico, on the same parallel with Vera Cruz, but four thousand three hundred and thirty feet above the sea, it is unknown." In Jamaica, Maroon Town, and the Phœnix Park, having an elevation of two thousand feet, they are noted for their healthfulness, while Yellow Fever rages along the coast, cutting off many thousands. In this Island, however, it has been known to exist, in a mild form, on Stony Hill, elevated one thousand three hundred and sixty feet.

Major Tullock, of the British Army, remarks that this disease has never been known in any climate at an elevation of over two thousand five hundred feet.

Mount Desmoulin, near Roseau, in the Island of Dominica, one thousand five hundred feet above the sea, is always free from fever, while it is raging within sight at the water line. The same exemption is observed in the Northern parts of San Domingo, whatever may be the character of the soil.

Dr. Drake, in his work, fixes four hundred feet as the limit of this fever in the United States. These figures would seem not

to be far out of the way, as the following table of localities and their elevation will show. This same law of limitation, by elevation, has been observed in Cuba, and elsewhere.

Fort Smith, in Arkansas, four hundred and sixty feet above the sea, is the highest point that this fever has reached in the United States.

Winchester, in Virginia, seven hundred feet, which I have placed upon the map, is said to have had cases in 1802. Although the statement, for this does not possess a convincing character, a correspondence with Dr. G. Miller, an old and intelligent physician of that place, still living, was opened, to verify the statement, but nothing could be learned that would give credence to the story; we do not feel at liberty, however, to omit the mention of the disease at that place, with the authority, also, that a person from the South died there, in 1871, of what was supposed to be Yellow Fever, directly after his arrival. There is room, also, for grave doubts of the correctness of the diagnosis, that it was Yellow Fever that prevailed at Gallipolis, in Ohio, in 1796, and at Bald Eagle and Nittamy, in Pennsylvania, in 1799.

The cases that are said to have been at Cincinnati, in 1871, were brought there by boat, direct from Memphis, which renders it probable that they were Yellow Fever.

And possibly the Yellow Fever said to have existed at some other points may have been only aggravated cases of Bilious Fever.

But lest we be misled, and attribute too much to elevation, we should not forget the remark of Dr. LaRoche, who notices how securely a stranger may live quite in the vicinity of the epidemic, if he does not enter the infected district. If this be true, it suggests that the stratum of air in which the infection peculiar to Yellow Fever exists, is heavier than that free from the poison; and, therefore, seeks the lowest and dampest localities.

If this view should be confirmed, that the peculiar poison seeks a stratum of air along the earth, rather than diffusing itself generally through the atmosphere, it would suggest a ready mode of removal from its influence, by having all houses and hospitals elevated ten or twelve feet, on piers and columns, with the space beneath the houses paved and left open for free ventilation.

It is clear, as shown by this map, that the disease has, in the United States, never, in its epidemic form, reached an elevation of five hundred feet. If elevation, then, of a few hundred feet, can exempt the inhabitants of a place from such a terribly destructive disease, the profession should, and will avail itself of this means, when practicable, by removing all inhabitants on to bluffs and elevated places.

So far as we could collect facts bearing upon the point in question, they are given in the following table:

A TABLE SHOWING IN ABSTRACT THE NUMBER OF LOCALITIES IN EACH STATE WHERE YELLOW FEVER HAS PREVAILED, AND THE ELEVATION IN FEET OF THE HIGHEST AND LOWEST ABOVE SEA LEVEL.

STATE.	No. of Places in which Yellow Fever has appeared in the State.	Locality of the Highest and Lowest Points.	Elevation in feet Above Sea Level.
Alabama	14	Selma	200
		Mobile	20
Arkansas	5	Fort Smith	460
		Grand Lake	130
Connecticut	9	Chatham	200
		Stanford & Stoning'n.	20
Delaware	4	Wilmington	45
		Christiana	20
Florida	13	Gainesville	160
		Tortugas	12
Georgia	4	Augusta	150
		St. Mary's	15
Kentucky	1	Louisville	450
Louisiana	45	Shreveport	220
		Plaquemine	6
Maryland	2	Baltimore	60
		West River	18
Massachusetts	6	Holliston	75
		Salem	20
Mississippi	21	Cooper's Wells	275
		Biloxi, Pascagoula and Shieldsborough.	10
Missouri	2	St. Louis	475
		New Design	420
New Hampshire	1	Portsmouth	40
New Jersey	4	Bridgeton	50
		Woodbury	20
New York	17	Greenfield	150
		Gowann's	15
North Carolina	5	Washington	35
		Beaufort	8
Ohio	2	Cincinnati	550
		Gallipolis	570
Pennsylvania	9	Nittanny	550
		Marcus Hook	15
Rhode Island	5	Providence	35
		Newport, Bristol, Block Island	20
South Carolina	7	Columbia	175
		Charleston	10
Texas	37	LaGrange	450
		Indianola, Sabine, and Saluria	10
Tennessee	1	Memphis	260
Virginia	10	Winchester	700
		City Point	15
Canada	1	Quebec	75

NOTE.—The above table, now only presented in abstract, for want of space, will be presented in detail in a future issue, and accompanied by the map.—[EDS.

ART. IX.—*Traumatic Aneurism of Neck, Ligation of Left Primitive Carotid, with Permanent Silver Wire Ligature.* By R. W. GIBBES, M. D., late Professor of Anatomy and Surgery in the University of South Carolina, at Columbia, S. C.

J. M., American citizen, of African descent, aged forty years, was shot by the watchman, at the Charlotte, Columbia, and Augusta Railroad Depot, on November 19th, 1872, at 9 P. M., while endeavoring to escape, after being guilty of theft. Captain G. (Clerk) found him a few moments afterwards, bleeding profusely from small pistol ball (conical) wound in chin; blood said to have been "spurting in a full stream," which he stopped at once by pressure with finger. The nearest physician soon arrived, and, on probing, thought he felt the ball, but the bleeding being again free, he thought it "best to postpone extraction." A compress and bandage easily arrested hemorrhage.

November 20th, at 12 M., I was asked to assist in extracting the ball, which was supposed to be only about an inch deep in left sub-maxillary region. I found a small wound on side of chin, one and a quarter inches below left labial commissure, and the whole of that side of the neck considerably swollen; numbness and soreness of left arm, with partial loss of its use; also, numbness and soreness of left jaw and teeth. After probe was introduced, I was asked to feel the ball with it. Discovering that the lower border of left inferior maxilla was shattered just below, and I think a little behind the mental foramen, I suggested a masterly inactivity with respect to the ball, it being impossible to say how many inches beyond that point it might be, and what vessel or vessels were involved. Arterial bleeding was quite free, but promptly controlled again by pressure.

21st. The case was placed in my hands; had not rested well; swelling of neck somewhat increased. ℞. Morphine ⅓ gr., Brom. Potass. 15 grs. P. R. N.

24th. Complains of soreness and pain in left shoulder, as well as jaw, and some cough; pulse eighty-eight, full and soft. Aneurismal thrill very marked, over about the central half of the quadrilateral embraced in the anterior and posterior cervical triangles. Has, from ignorance, only taken two doses of the prescription. ℞. Repeat medicine every two hours, and increase dose, if necessary, to procure rest, etc.

26th. Swelling of neck less, but aneurismal thrill very evident, as before; cough troublesome, and expectoration of viscid sputum (not bloody), with diminished resonance and subcreptitant râles over superior third of left lung. In inferior and posterior portion respiratory murmur normal. Patient is said not to have exhibited any pulmonary symptoms previously, and it seemed possible that the ball might have injured the supra-clavicular portion of

lung, besides wounding one of the large cervical vessels. He is able to raise the arm, but there is very little power in it. ℞. Continue Morphine mixture, P. R. N., with addition of Syr. Ipecac and Camphor water.

28th., 11 A. M. Feels better; swelling of neck much diminished. On passing hand over prominent part, I felt ball under sterno-mastoid muscle, near its posterior border, and on a level with cricoid cartilage. Pulse eighty-six; temperature 99.6. Some pus discharged from wound.

December 5th. Swelling increased so much that I cannot distinguish ball, but cough is much better. On squeezing upward from sub-maxillary region ℥ij. or ℥iij. of sanious pus exuded. ℞. Poultice to sub-lingual and sub-maxillary regions. ℞. Tr. Opii. gtt. xx., Hoff. Anodyne ℥i., when necessary. Believing it necessary to take up the carotid, I wrote to New York for Spier's Artery Constrictor.

6th. Swelling increases; *fremissement* loud and strong over whole left side, and there is no doubt of formation of consecutive diffused aneurism. One dose of medicine made him rest well, and he does not cough in daytime. Left arm almost completely paralyzed; can raise it with deltoid, but cannot close his fingers. I telegraphed to Tiemann & Co. for the instrument.

7th and 8th. About same; swelling seems stationary, fortunately; a little puss comes from wound of chin by squeezing upward.

9th, 12 M. Instrument just arrived, but, unfortunately, is too small. No material change in man's condition. Pulse eighty; temperature 100.8. Operation performed in presence of University Medical Class, Professor LaBorde, Drs. Trezevant, Lewie, and Sylvester, and with Drs. Talley and Taylor as main assistants. After all had examined with stethoscope, and heard the remarkable *fremissement*, the usual incision was made along anterior border of sterno-mastoid muscle. The *descendens noni* was soon observed on anterior and inner surface of sheath, and drawn back by a blunt hook, as was also the internal jugular vein, which passed obliquely in front of the carotid below, and almost overlapped it at the omo-hyoid crossing. On opening the sheath, just above the omo-hyoid, and having the nerve and vein drawn well back, the pneumogastric was seen between the vessels, and posteriorly very deep. The artery was now raised on a groved director, and the aneurism needle, armed with a small double silver wire, passed under it. The "bruit" heard under the stethoscope ceased immediately when the wire was drawn upon so as to occlude the canal. I then tied it in a common reef knot, cutting ends off close, without having constricted sufficient to divide either coat. The very short ends were turned against the vessel, or rather upon the constricting noose, and the wound closed by four silver wire stitches, including thickness of

platysma myoides in each. Two strips of isinglass plaster were applied, and the upper part of wound covered with collodion.

I should have stated that close behind the upper end of my incision I found and removed a small piece, say about one-eighth, of the conical ball, which had been split off by the shattering of the bone, and is what was felt before the operation. The rest of it lies much deeper, and could not be found, it having injured not only the artery, but a part of the brachial plexus.

A director was now passed into the original wound, on side of chin, and a counter puncture made on neck, about two and a half inches under it, and one inch anterior to the superior angle of incision, a tent being introduced from below, upward, on account of the suppuration connected with wound of maxilla.

On arousing patient from chloroform, gave him whiskey; pulse being sixty-four, and temperature in axilla 98.5; feels chilly. Ordered whiskey, half ounce, every hour or two, external warmth, etc.

5.45 P. M. Has dozed some, but is chilly, and head "begins to sorter ache;" does not want more whiskey; pulse seventy-two; temperature in axilla 100.6. ℞. Milk and mush, and if he can't rest, give him Tr. Opii. and Hoff. Anodyne.

10th, 11 A. M. Rested well after one dose, but still feels chilly; thin, purulent discharge from lower angle of incision, as well as from tent, which I removed from counter puncture above; arm better, but there is a slight cough; temperature 102.7.

11th. Better, and acting well; temperature 102.2.

12th. Improving, but suppuration of old wound has evidently extended under incision, and their connection is shewn by use of syringe with a weak solution Carb. Acid.

13th. Doing well, except that I discover deficient sensibility in right leg, and find that the whole sole of right foot is blistered from hot bricks applied two days ago, to warm his extremities. On puncturing it several ounces of serum escaped. Temperature 100.7; pulse seventy-six; no cerebral symptoms observable.

14th. At three P. M. yesterday he fainted, after getting up and walking alone to the fire; no bad effects; temperature 100.1.

15th, 12 M. I found pulse one hundred and ten; temperature 104.2; had a chill last night, at seven P. M., followed by "high fever." I can discover nothing on auscultation. Removed two lowest stitches, and syringed. Believing that there was a malarial complication, although it might be septicemia, ordered Quinine, thirty-six grains, to be taken in six grain doses, in next twenty-four hours.

16th, 12 M. Just finished Quinine; better; suppuration less; pulse ninety-six; temperature 102.

17th and 18th. Better; hardly any discharge.

22d. On his feet with a stick, but walks with difficulty as right

leg is a paralyzed, evidently from deficient cerebral circulation on opposite side.

The left arm is about same as before the ligation, its functions considerably impaired. ℞. Galvanism. I saw him two months later; had not used galvanism, and seemed about the same, except that the paralysis of right leg is decidedly lessened.

December 6th, 1873, one year after ligation. I have seen Jack to-day, and examined him carefully, with several professional friends. The paralysis of right leg, the result of the operation, is much diminished, but still quite perceptible, and he walks well with a cane. The loss of power in the left arm (caused by the wound) is also somewhat improved. He uses it in eating, and in cutting wood, and can grasp one's hand pretty firmly in his palm, but not with ends of his fingers.

On applying the stethoscope a loud bellows sound is heard, occupying the whole left carotid region from sterno-clavicular junction to angle of maxilla, which ceases the instant that his head is extended, or his face slightly turned to the right, and also as soon as slight pressure is made on the vessel pulsating immediately behind the corner of the Os Hyoides. Whether this is the lingual or superior thyroid, I find myself unable to determine, although I think it is the latter. The carotid is felt pulsating strongly above the point of ligation, but below it appears a firm cord, with only a slight impulse communicated to it from the arch of the Aorta. I cannot feel the double constricting wire, but when the finger presses firmly on the spot, he says *he* feels it. I should have mentioned that the *bruit* is synchronous with the first beat of the heart, and extends over the second, masking it completely. No murmur can be heard on the right side of neck, and none in the precordial region.

Now, I should be much gratified to know where the arterial lesion was, where the ball is, and how is the *bruit* to be explained. Can any of your readers enlighten me? In the meantime I shall endeavor to keep an eye on the case.

I may say here that had there been a true aneurismal sac, I should have employed the method of Dr. Benj. Howard, of New York, as recommended in his prize essay on the treatment of aneurism, by the "constricting silver wire ligature," *i. e.*, I should not have tied firmly enough to occlude, but only to diminish and retard the arterial current.

This, which promises, in my opinion, to prove the most efficient plan of carrying out the Hunterian idea to produce the formation *slowly, but surely*, of a hard clot, which will plug both sac and vessel without the risk of either suppuration or hemorrhage, I regard as one of the most important improvements in modern surgery, and I am anxiously awaiting the practical results of its trial by those who have extended opportunities of testing it.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

ART. X.—*A Treatise on the Principles and Practice of Medicine; Designed for the Use of Practitioners and Students of Medicine.* By AUSTIN FLINT, M. D., Professor of the Principles and Practice of Medicine; of Clinical Medicine in Bellevue Hospital Medical College. *Fourth Edition, carefully revised, pp.* 1070. *Philadelphia,* HENRY C. LEA, 1873. (*From the Publishers.*) [Modern School of Practice.]

This being the fourth edition, carefully revised, of Dr. Flint's Practice of Medicine, a review of it is not required at our hands; but we would call the attention of those of our readers who have not examined the work, to some special features in the treatment of certain diseases, which illustrate the views of a prominent and able physician, and which we think are very significant also, as they differ more or less widely from those which have been held and taught by many only a few years since.

Without a personal acquaintance with Professor Flint, yet with some experience of his obliging disposition, we admire him for his energy and industry, for what he has done for the profession in America by his numerous original clinical investigations, for the highly practical character of his writings, the moderation and conservatism of his views as regard treatment, his power of condensation and the clearness and lucidity of his style. There being no Southern book on Practice since Dickson's, and if we except Watson's, we know no other which is better adapted to the purposes intended, more applicable to the wants of the students of this country and which we would prefer to place in their hands. In this connection a reference should be made to the volumes of Professor Wood which may contest the palm with these. Works like Aitken's, Trousseau's and Reynolds' are rather to be read and consulted by the physician, and Niemeyer's excellent and invaluable as it is, requires, and will surely repay the profound study of those more fully instructed in the art of Physic; but we think that it is not suited to the capacity of beginners. Yet, if one wishes to feel the superiority of Niemeyer and to be convinced of the breadth and completeness of his views particularly with regard to pathology, let him examine his chapters on the Diseases of the Heart, and compare them even with those of writers who rank highest as authorities on this special subject.

But assuming our journalistic rôle as critic we would say that

though we cannot expect every writer to be complete and perfect, yet we are inclined to demand a great deal of him who, knowing that his work will be in the hands of every one, undertakes to prepare a compend for the daily use of students and practitioners. Whatever may be the demands upon his time, we would require him before sending forth a new edition, to search carefully and minutely into all sources of information; it is his *duty* to examine the original authorities included in monographs, papers, etc., which are published everywhere—especially those issued from localities where certain diseases more commonly prevail: for unless he uses due diligence important facts may escape him. Especially is this the case in any departments in which the author has not worked personally, or has not seen with his own eyes that which he describes; for then there will almost surely be evinced a want both of freshness and completeness of knowledge. If what is just written could apply to any section or portion of the book before us, after the display of so much talent, experience, research and labor (*we* know well how much) which have been expended in its preparation, we would hesitate to speak slightingly, or in terms of disparagement, of what is otherwise so excellent—for it would savor of presumption in us to do so. It is quite easy and it imparts an air of at least temporary and cheaply acquired superiority to indulge in comments of disapproval of an author applied in the "*de haut en bas*" style, or after the happy manner of the brave people of Lilliput who shot their little missiles in countless numbers into Gulliver when he was securely bound and in their power—pricking and irritating his skin considerably. But so would an author who possesses real merit rise ultimately in his true strength, and picking out the darts which had stung him, or assuaging the wounds, if he had received any of importance, he would show the superiority which knowledge, training and real power invariably give to their possessor.

To cite only one or two examples of the practical character of the recommendations made in this work we would advise the reader to examine the statements with regard to the value of alcohol as a curative agent in Tuberculosis, the remarkable tolerance of alcoholic stimulants by those suffering from this disease, and the testimony as to their general innocuousness in such cases so far as the acquiring a dangerous habit is concerned. Attention is also invited to what is said respecting the use of cod liver oil, and the beneficial or preventive influence of cold climates and Alpine regions.

But we are curious to observe what plan Professor Flint still continues to recommend in diseases where adhesive inflammations occur, such as peritonitis, pleuritis, iretis, etc. With regard to the treatment of inflammations involving the serous structures attended with the exudation of plastic lymph—*Peritonitis* for

example, he states, (and we have similar views presented specially by the German authorities) that in New York and elsewhere a great change has taken place. This consists in the disuse of blood letting and cathartics and in relying mainly on the use of opium. Armstrong, Watson, Stokes and Graves had all advised opium. Dr. Graves, (we say by way of parenthesis, having carefully read the last edition of his practice by Nelligan,) was by no means wanting in his general advocacy of mercury—the re-action against the excessive use of which he was only beginning to perceive the necessity of, and to aid in promoting. No more interesting paper could be prepared than one containing a critical examination and comparison of the treatment of diseases recommended by so acute an observer as Graves. It would bring discredit, nevertheless, upon any one who would now dare rigidly to follow in his footsteps—so variable and changeable seem to be the principles and the practice of the best physicians and teachers of any age when compared with those which succeed them; and so powerfully are we admonished to avoid too great confidence or dogmatism in the assertion of what *we* may *believe* to be true. This caution applies specially to those who occupy either extreme in the schools of practice, as they exist at present: namely the ones who push mercury, opium, purgatives, and more rarely bleeding, to a vicious and absurd extent, before reaching which judgment, prudence and common sense, (which are the handmaids of success,) have long since deserted them; or those who at all hazards and in every emergency will persistently abstain from interfering; or who in carrying out the "restorative" plan, will fill to repletion or over stimulate the sick; and whilst engaged in a "meditation on death" will calmly, patiently and with perfect self-complacency await the issue of the "hands off" system. Blind guides all of them: for cunctation and a wise passivity are as suitable in some cases as the greatest activity is in others*—the most energetic measures being really required in the early stages of some acute diseases and the least active in other conditions. This certainly does not either require or merit discussion. For us who favor the employment of the least possible quantity of any medicinal agent that will suffice, if unfortunately compelled to select between the two methods, the least active would be infinitely preferred; but men *may* live through both and in spite of them, *because* the animal organism, whether it be unaided or it be harassed by drugs, has wonderful power to right itself and repair the damages it has sustained from whatever source; as Grisolle ("*Pathologie Interne:*" vol. 1, p. 707,) most appositely and forcibly ex-

*Festination may prove precipitation, a deliberate delay may be wise cunctation and slowness is not always slothfulness.—[SIR THOS. BROWNE.

presses it: "Il importe donc de rester dans une sage mesure, et en présence de ces succès plus exalté, rapprochements [illegible] pas d'opérations irrationelles, de procédés barbares, de médications incendiaires, dont la force modératrice de la nature finit souvent triompher." Professor Flint has adopted neither the *médicine opératoire* or the "heroic" plan. He has had the wit to shun both—for he really supposes some active remedies for many of the maladies of which he treats. Those who are sometimes accused of favoring one party or the other would reply that they pin their faith and practice to neither—but first following Chomel's golden rule to do their patients no harm, they would hold their finite judgment in reserve, ready to select or appropriate from each what seems to be adapted to the management of the protean forms of disease, as modified by the infinite varieties in human constitutions. They would prefer not to be known as the representatives of nihilism any more than of what is extravagant, violent or destructive; they would simply desire to act with common sense in applying the agents at their disposal, with the lights of that knowledge which is vouchsafed them, and which has been gained by observation, reading and reflection.

We do not regret that this review did not appear in the October issue for which it was prepared, as we are enabled to add M. Trousseau's testimony contained in the admirable introduction to his work on Clinical Medicine, published near the conclusion of his career, with all the lights of a vast experience:

"I have long been disposed to doubt the efficacy of medicine in acute pneumonia. Long ago I was tempted to leave nature to bring to a favorable issue this disease, against which we are all disposed to act so vigorously; but I have not yet dared so to act. Antimonials, emetics, and digitalis, are my chosen weapons; and I should consider that I failed in my duty if, convinced as I am (perhaps erroneously) of their great utility, I did not employ them, that I might see in what manner nature would bring the disease to a conclusion.

"Abstinence from treatment answers admirably in mild diseases, and one may, without dereliction of duty, study their natural characters left undisturbed by the intervention of art; but when there is danger, and we believe that we possess a remedy capable of removing that danger, conscience calls out to us to be doing, and brings us back to active treatment, even when, for a moment, we were about to yield to the seductive influence of a culpable curiosity.

"This abstinence from interference which I have now censured, I, however, entirely approve, nay, I proclaim its opportunity, when we have to deal with diseases against which all treatment has proved useless. In such cases, waiting teaches us at least

"The employment of mercury claims a few remarks. Mercurialization has been deemed highly important in this disease by most practitioners heretofore, and it is still deemed important by many. It is supposed to be useful in this, as in other serous inflammations, by limiting exudation and promoting its absorption. The opinion has already been expressed that the so-called antiplastic and sorbefacient action of mercury has been much exaggerated, but that we are not authorized with our present knowledge to deny to this remedy any curative power. And it is perhaps questionable whether, in so grave an affection as acute peritonitis, we are fully warranted in omitting this remedy. I must confess, however, that for some years past it has not entered into the treatment of the cases of which I have had charge. The employment of mercury should not diminish the reliance on opiates; and it should be so employed as not to interfere with the objects of the opiate plan of treatment. If given internally, it should be in fractional doses, so as to avoid a cathartic effect, but a preferable mode is its employment by inunction.

"In endeavoring to determine clinically the relative value of different methods of treatment, cases should be grouped according to the different circumstances giving rise to the peritonitis. As regards the prospect of success from any treatment, cases of perforation, evacuation of pus into the peritoneal cavity, rupture of the gall-bladder, etc., are not to be classed with cases of simple peritonitis. Moreover, the disease, more especially in its simple form, is too rare for a clinical observer, however large his field of practice, to accumulate many cases. I have notes of thirty-five cases which have fallen under my own observation. Of these thirty-five cases, seventeen proved fatal, death being attributable to the peritonitis *per se*."

Of the fifteen cases ending in recovery, Dr. Flint adds, that the treatment was exclusively or chiefly by opium. We have never tried the treatment of peritonitis by opiates exclusively, but will briefly relate an exceedingly well marked case in which we had omitted to use calomel and opium. The patient, a gentleman, rapidly got worse and was in imminent danger, the inflammation having extended to the bladder causing strangury; all the bad symptoms disappeared upon the occurrence of ptyalism when, in consultation with the late Dr. Bellinger, he was put upon the use of repeated small doses of calomel and opium. The same gentleman had a second attack under our care a year afterwards with precisely similar results, and we did not long permit his cure to be delayed for want of the same means. Our experience in the treatment of Iretis, which has been sufficiently ample in hospitals with some cases also in private practice, shows the value of these two agents when conjoined with the external application of Belladonna or Strammonium extracts to keep the

iris movable. It has also been very striking with regard to the abatement of the inflammation, the restoration of clearness to the iris, which were invariably *synchronous* with the peculiar action of the medicines upon the system. With all our antipathy to and disapproval of salivation, we have seen no ill results ensue either in such cases, or even in some aggravated and intractable forms of pneumonia in which we have been compelled to run the risk of the induction of slight ptyalism. Absorption of the hepatized lung tissue, or resolution of the engorgement seemed to be consequent upon the use of mercury in small doses even when it did not produce its specific effect. Quinine, stimulants and blisters may be associated with it and are we think sometimes required.

It is barely possible that in some or in all such examples the opium alone would have sufficed; but without more confidence than we now have, we should not venture to trust to either remedy singly. We had supposed that this corresponded with the general experience of the profession until we met with writers who claim to have treated iretis successfully without either calomel or opium.

Dr. Roberts in his work on Practice which we have just received, says that "Calomel is a drug which had better be avoided except as an aperient" in the treatment of pleurisy. Dr. Flint also does *not use mercury* in this affection! He says: "The remedies supposed to act as sorbefacients are mercury and iodine. Mercury I have long ceased to employ for this end. Of doubtful efficacy, the annoyance and other evils incident to mercurialization render it objectionable. The efficacy of iodine is, perhaps, equally doubtful, but it is not open to similar objections. It may be given internally or applied externally in the form of either the ointment or tincture." He is not opposed to the use of bloodletting in the *beginning* of acute cases in otherwise healthy subjects. He gives this testimony with regard to the Medical Cycle or Constitution of the Period, which it is assumed by some has made a radical change in treatment advisable and necessary. We have always doubted whether any such alterations had ever existed—the oscillations having occurred only in the practice of the men of the period:

"The opinion held by some that diseases have undergone a notable change within the memory of those now living has been already referred to. They who hold this opinion suppose that bloodletting and other antiphlogistic measures are less appropriate now than formerly in consequence of such a change. With a professional experience of nearly forty years, I do not hesitate to express a conviction that acute inflammations at the present day are essentially the same as they were as far back as the time just named, and that antiphlogistic measures were neither more nor less appropriate then than now."

Dr. Flint, with Dr. Morril Wyman, Bowditch, and those who now use the aspirator for the same purpose, is commonly in the habit of performing thoracentesis. He prefers a simple apparatus, namely a small trocar and canula fitted to screw upon the flexible suction tube of Davidson's syringe. The canula should be furnished with a stop cock. The trocar and canula being introduced into the chest, the trocar is withdrawn and the canula attached to the syringe; the liquid is then removed by means of the expansion of the India rubber suction bag after its compression with the hand. He and others have used this apparatus in many cases with satisfactory results. We have ourselves recently employed the aspirator in withdrawing pleuritic effusions and we have seen it successfully used by the physician in the City Hospital in this city in removing accumulations in the knee joint. Since the construction of so ingenious and almost perfect an instrument such operations should be much more frequently resorted to.

We hope that the peritoneal cavity and even the pericardial sac will now, as was advised by Trousseau, be more readily and safely penetrated and emptied of their morbid albuminous and fibrinous exudations.

In his recommendations with regard to the treatment of *Scarlet Fever* Dr. Flint is very moderate, as was Heberden a hundred years ago, and we think that he is extremely judicious. "Mild cases," he says, "do not call for active measures;" we would add that no case requires any measuses which would disturb the system materially—any more in this disease than in measles. Bloodletting, active purgatives, mercurialization, blisters and emetics are of course regarded by our author as in general opposed by sound reason and by experience. When agents such as these were employed, as was frequently the case as may be seen in books not now out of print, we believe that the physician was often answerable for the fatal termination. The expectant plan, with warm baths, cold sponging, the use of the wet sheet, chlorate of potash, local applications to the throat, free ventilation, cooling drinks, etc., are we think all that are advisable not only in this, but in all the eruptic fevers, if we except the use of cold in small pox as possibly of doubtful propriety. A perturbative, meddlesome treatment is often the *cause* of the apparent severity of the disease, and like the too frequent use of purgatives and mercurials in bilious remittent fevers, gives rise to symptoms which are often erroneously attributed to a special malignity assumed to belong to the disease itself. Undoubtedly malignant forms do occasionally exist.

Curry long ago and Trousseau and others latterly, recommend cold affusions, just as we invariably employ them in the early stages of yellow fever. This use of cold water in scarlet fever

has been successfully practiced by a number of physicians who reported their cases in the Transactions of the Pennsylvania State Medical Society for 1872, and to which we refer in the review of Chew's paper on the Uterus in the October number of this journal. With regard to Curry and Trousseau's recommendations of cold applications Dr. Flint states that the apparent coldness of the practice renders it frequently objectionable on account of popular prejudice, though it is the most efficient measure for the relief of the active delirium which sometimes occurs in this disease. The tepid bath, once or twice daily, is also recommended by Dr. Flint. If the bath be not practicable, the application of a sheet wet with tepid water or repeated sponging may be employed in its stead—measures which by maintaining the functions of the skin lessen the liability to affections of the kidneys. He thus refers to the wet sheet: "Employed as an efficient antipyretic measure the wet sheet is applied over the whole body, without any other covering, and the surface is sprinkled with or dipped in cold water at short intervals in the manner described in the treatment of typhoid fever and insolation." The rise in the thermometer is an indication for its repetition and "there is no reason to fear on the ground of danger of repelling the eruption in employing the wet sheet as a sedative and diaphoretic measure, water is to be used at about the temperature of 75° Fahr., the patient, stripped of all clothing, is enveloped in a sheet and closely covered with several blankets. The procedure is that practiced by the hydropathists and called by them the *pack*. Usually after remaining in the pack for a few minutes, free perspiration is induced. The pack is to be removed when this effect occurs, the body wiped dry, and the patient placed in bed. The frequency of the pulse is often notably diminished by this measure; the patient is tranquilized, and passes into refreshing sleep. The measure may be repeated once or twice daily. Its effect is so agreeable that patients often desire to be subjected."

With regard to the reduction of temperature in fevers the use of cloths frequently changed in ice cold water and emitting intervals, because they can be made *perfectly efficient* meets little opposition from those ignorant of the great comparative value of cold applications in diminishing the intensity of fever and in materially aiding in the treatment of almost all diseases. Wet packing and even full baths are seldom necessary.

We find in this work no reference to hemorrhagic malarial fever, a peculiarly remarkable form of which we have seen but few cases, and which has been fully described particularly by physicians of Alabama. Though our author advises vermifuges where worms are supposed to be present, he lays no stress

upon the verminous origin of fevers in children. He describes gastric remittent fever under the head of sub-acute gastritis and he only refers incidentally to gastric catarrhs; nor is the line drawn very strongly between the two affections as is done by Niemeyer. It is the result of our own observation that gastric remittent fever is very frequently met with at the South, as a special and well marked affection, not necessarily malarial in its nature or only sometimes complicated with malaria, manifesting itself by peculiarities which belong to it alone, and that it requires a special mode of management, principally by alkalies and revulsives. We are glad to find that Professor Flint sustains the opinion that it is very seldom fatal. Professor S. H. Dickson has portrayed some of the chief features of it in his work, laying stress upon the red and pointed tongue by which it is invariably characterized in our experience; but we think that Professor Wood has given far the best and most accurate description of the disease with which we are acquainted. Dr. Butter of England gave the first distinct description of this disease in 1772, and Dr. Locock devotes a chapter to it under the title of "Infantile Gastric Remittent Fever," in the Library of Practical Medicine, Vol. I.; so that we do not hesitate to concur with those who regard it as a distinct form of fever requiring a special method of treatment and it should not be considered as a gastric *catarrh.* Whilst we frequently meet with remittent fevers wholly of gastric or gastro enteric origin in children, we have very rarely seen the gastric catarrhs described by Niemeyer with the special peculiarities, namely large mucous accumulations which he has pointed out.

Dr. Flint has added eighty pages to this edition occupied principally with the Neuroses, many of the forms of which he describes. Yet as far as we can see he has not referred to Dr. Handfield Jones's investigations with regard to affections allied to neuralgia, but which we think are not identical with it, which are characterized by excessive hyperæsthesia, in which there is absolutely no fever—the disease running a regular course and in which *pain* accompanied or caused by depraved nutrition, depressing emotions, anxiety, etc., is the chief and often almost the only characteristic. This is one however which is highly important and most difficult to remove. Doubtless the author has some good reason for avoiding a reference to this subject as we are aware that he is cognizant of everything that has been done by Jones, Romberg and other writers with regard to this obscure and ill defined Neurosis. Dr. Jones has confessed the difficulty which attends its diagnosis and his inability to give a suitable name to the affection—a difficulty which we have ourselves experienced and which we have attempted to explain in two papers published in the American Journal of the Medical Sciences.

F. P. P.

ART. XI.—*Lacerations of the Female Perineum and Vesico-Vaginal Fistula—Their History and Treatment.* By D. HAYES AGNEW, M. D., Professor of Surgery in the University of Pennsylvania. *Philadelphia*, LINDSAY & BLAKISTON, 1873.

These papers, though now put for the first time by the author in book form, are amended reprints from the Pennsylvania Hospital Reports and the Medical and Surgical Reporter. They can now be more readily referred to by the profession, who have long appreciated the ability with which the author has performed his work.

We desire only to offer a brief comment upon the operation for Lacerated Perineum. We conceive that very few surgical authorities do justice to the description of this operation. Differences of opinion too still exist as to the following important points: 1. The need of separate operations for the rent in the recto-vaginal septum and the perineal laceration proper. 2. The completion of the operations at one *seance* or two. 3. The kind of suture to be employed. 4. The propriety or necessity of dividing the sphincter muscle of the anus.

The author is firm in his convictions in favor of but one operation ; he prefers the interrupted wire suture; and does not interfere with the sphincter.

The description of the operation is upon the whole clear, and more simplified than that given by many surgical writers. But in detailing a few instances in which, during his earlier experience, he practiced separate operations for closing the two fissures, he is not altogether free from the defects or imperfections of description which characterize so many who have made like efforts. Where in closing the two fissures, that of the septum and the perineal fissure proper, two sets of sutures are used at one *seance*, and made to run transversely to each other, it is difficult for the uninitiated to perceive how the sutures of the septum are ever seen through the ostrium vagina, and how they are removed through this same aperture after they have done their work. Many of the ingenious departures from the ordinary plain Baker Brown operation we have never been able to appreciate, and if they possess the value claimed for them by their originators, we submit that the descriptions given to the professional public are wholly inadequate, and that the new methods must be learned by personal observation. The upper portion of the recto-vaginal rent we apprehend may, at times, be closed by sutures running transversely to the axis of the rectum, and these, with care, may be removed through the vagina; but when the transverse sutures are continued down to the anal opening, and the perineal laceration is afterwards closed by the usual deep sutures passed almost perpendicularly to these, we

think the operator has made trouble for himself and his patient. Professor Agnew, we have reason to know, (not however from his published description,) when practising these operations closes only a portion of the recto-vaginal rent by transverse sutures, fixes the loop of each suture by compressed shot, and leaves their ends long and free in the vagina to facilitate removal. But even after such an expedient the surgeon must find difficulty in removing these sutures, and too often the attempt will result in breaking up the new adhesions of the part, and in a failure of the operation.

Professor Agnew believes, however, that the cases are very exceptional where separate sutures are required for the septum, and, as a rule, he wisely advocates only one set of sutures for effecting the closure of both rents, or the entire wound. The important point with him, as with Dr. Emmet and some others, is that the lowest suture, that nearest the anus, shall be introduced and brought out on the buttock well behind the plane of the anterior wall of the rectum. It must pass deeply into the septum and run around the anterior wall of the rectum, and through the vaginal tissue, in such proximity to the summit of the recto-vaginal fissure, that after it is tightened the tissues embraced in the loop will be "pursed up." The ends of the wire are held by a compressed shot on the middle line of the perineum, immediately in front of the imperfect anus. The sphincter muscle is not interfered with. The modern effort is to simplify these operations by using the interrupted suture and doing away with the division of the sphincter, but in bad cases of deep fissure of the septum, where the easy "pursing up" of the tissues cannot be effected, we are disposed to maintain that union is rendered more likely after the bi-latero-posterior division of the sphincter, or the paralyzing of the muscle, after the plan of Professor Van Buren, of New York, and by using the quilled suture, or some modification of this.

Professor A. now recommends, as the material for the suture, silvered iron wire, as being stronger than the suture made of the purer metal. To those preferring the quilled suture, wire can of course be used, and perforated bars either of lead or hard rubber.

We desire, in this connection, simply to note the fact that we have under trial, to be hereafter reported upon, a modified plan of using the wire sutures, especially the one that is passed nearest the rectum. The idea is to make this suture take the direction of the continuous fibres of the sphincter muscles of the vagina and anus. Two wires are used. They are entered one on either side behind the plane of the anterior wall of the rectum, made to cross each other in the fissure in front of the rectum, and to emerge through the integument at corresponding points anterior to the rectum, and on either side of the perineal rent. The posterior ends are first secured after passing them through a leaden

or hard rubber button, or bead, of proper size, by a clamped shot, or by twisting them around a nipple like projection coming from the upper surface of the button. The anterior ends are then drawn upon sufficiently to "purse up" the tissues and close nicely the posterior portion of the fissure in the perineum as well as the rent in the septum, when this exists; after this these ends are secured in the same way as the posterior ones. Other wires may now be passed and made to cross in a similar way, so as to bring together the entire perineal fissure; or the anterior part of the fissure may be united by wires passed as usual in the transverse direction.

Authors now generally advise syringing out the vagina with an anti-septic lotion during the progress of the case after operation. We think it necessary here to refer to the necessity of not beginning this until after the lapse of several days, lest the healing process be thus interfered with.

ART. XII.—*Contributions to Practical Surgery.* By GEORGE W. NORRIS, M. D., late Surgeon to the Pennsylvania Hospital, Vice-President of the College of Physicians of Philadelphia, etc. 8vo., pp. 381. *Philadelphia*, LINDSAY & BLAKISTON, 1873.

These contributions are in part already known and valued by the profession, and the name of the distinguished, conscientious, and much loved author, is sufficient guarantee for the worth of what is now offered as new. Most of the old matter has, however, been improved and added to, so that the entire volume, made up of numerous essays will well pay careful study. Dr. Norris has long been known in the renowned medical city of this country as the representative of safe, practical solid surgery, and none who have come in contact with him could have failed to perceive that his modesty enhanced that value which came of his learning and strength of mind. When knowing him, even in our student days, we admired him for his *want of* "*flash*," and in maturer age we have ever regarded him as one of the ornamental and solid pillars which fixed our reverence for the past, and made us also feel how valuable he was to the present.

We had hoped to give a full analysis of the book, but want of space prevents. We regret this the less, as we find the work already done by abler hands, and by those who have daily breathed the inspiration of the author's presence. We shall not even attempt a full critical analysis of any part, but in our hearty endorsement of the volume as a whole, must remark that the new chapter on "*Compound Fractures*," although a very

valuable one, does not exactly breathe the spirit of the age. While "*coaptation and immobility*" are truly recognized as the important requisites for the successful treatment of fractures, the general employment of the "immovable apparatus," both in simple and compound fractures, is, we think, not fully appreciated. There is expressed the old time dread of "inflammation, abscesses, and gangrene." In the skilled hands of the author, and with the use of his approved means, there may not be great danger from changing and removing the dressings of compound fractures daily, but let this be attempted by two-thirds of the practicing surgeons even of this enlightened age, and we opine that the advantage of immobility will be wholly lost. This paramount indication is only effectually carried out by an apparatus moulded to the limb, and left undisturbed. Simpler contrivances, so mis-called, may often do as well if these remain undisturbed, but at last none are so comfortable and so certain in results as the most approved modern immovable apparatus.

Dr. N. thinks the "chief value" of this apparatus is in its adaptation to "military surgery," and from his general advice we learn that he is not favorably inclined to its use in civil practice. We cannot agree entirely with this reasoning. As military surgery offers us the largest number of bad cases of this kind of injury, most surely what there finds a proper adaptation ought not to be objectionable in the majority of cases occurring in civil practice. As to the period after the accident when it may be objectionable to apply the apparatus, this is another matter, and one we do not propose to discuss.

But, further, Dr. Norris appears to discuss the question of the immovable apparatus from the standpoint of a past age. He explains the kind of arrangement introduced by the great Larrey, and affirms that "the use of the immovable apparatus in open fractures is directly opposed to that" (treatment we presume he means) "recommended by Pott, and generally adopted with us, viz, of dressing accidents of this class every twenty-four hours." Among the advantages claimed by its advocates, according to Dr. N., is: "1st. That it prevents effectually all contact of the air." Dr. N. afterwards alludes very briefly to the fact of the use of "Plaster of Paris as the immobilizing agent" with the German surgeons, and of the "cutting of windows opposite the wound to give exit to the discharge." Here, then, the exclusion of air is not the chief merit claimed for the modern contrivance. Larrey and Pott have passed away. We recognize their merits, but we improve upon their principles and practice. With plaster we substitute the "styptic gelatinous liquor" of Larrey, and through the modern "windows" we carry out the daily dressings, thought so essential by Pott. When it becomes a question of the disadvantages of air, we may consider the propriety of antiseptic dressings.

[illegible]

Being convinced that Cholera is due to the presence of parasites, which multiply themselves in a frightful way, and being persuaded that Ethiops Mineral is capable of combating and vanquishing this scourge, in as much as it destroys the parasites: a large number of his medical friends have been at the pains since the last invasion of Cholera in Italy to recommend to their patients to have immediate recourse to this remedy before the germ of the disease has had time to multiply itself in the organism. It is recommended to all, who are exposed, to take immediately a moderate dose of the remedy and to repeat it in case it is vomited.

It has been thought advisable that apothecaries should be instructed as to the proper dose so that they can prepare it for every one attacked. The dose varies according to age—from twenty-five centigrammes to one gramme and a half—(even more can be given without danger); and the pharmacist can furnish to each one a quantity sufficient for three doses. In this way it is believed that the remedy will often put an end to the disease in less than an hour; or if not, the physician when called has only to continue its use and watch the progress of the case. The preventive method of cure by this agent has this advantage (since it destroys in an instant the cause of the disease) that it makes lazarettos and pest houses useless. The author has renewed faith in the remedy as one which possesses almost miraculous power and which can be generally used among large bodies of men whether on land or on the sea. F. P. P.

ART. XV.—*On the Action Medicines in the System.* By FRED. WM. HEADLAND, M. D., F. L. S. From the fourth London Edition, revised and enlarged. *Philadelphia*, LINDSAY & BLAKISTON, 1873.

Materia Medica for the Use of Students. By JNO. B. BIDDLE, M. D., Professor Materia Medica, etc., in Jefferson Medical College. Fifth Edition revised and enlarged, with Illustrations. *Philadelphia*, LINDSAY & BLAKISTON. (From the Publishers.)

We simply indicate to our readers the issue of recent editions of these books. Headland's is well and favorably known as one of the best works on the subject of which it treats. Professor Biddle's volume is we think more like a syllabus and it is well suited to the use of students, as the descriptions of each article are brief and plain and there is a full supply of well executed illustrations which aid the memory. There are also brief references to nearly all the useful indigenous plants. The books are published in excellent style.

ART. XVI.—*Lectures on Clinical Medicine.* By A. TROUSSEAU, late Professor of Clinical Medicine in the Faculty of Medicine of Paris, Physician to the Hotel Dieu, etc., etc. Translated from the third revised and enlarged edition by Sir JNO. ROSE CORMACK, M. D., etc., and P. VICTOR BAZIRE, M. D., etc., complete in two vols. *Philadelphia*, LINDSAY & BLAKISTON, 1873.

We have received this valuable work which is excellently printed and bound. It is so favorably known to the profession that a simple acknowledgment is all that is required. To the student of clinical medicine or to the practitioner it is invaluable.

QUARTERLY SUMMARY.

Abstracts, Translations, etc., from Foreign and Domestic Journals.

SURGERY.

Bloodless Operations.—The British journals have lately given full accounts of the plan suggested by Professor Esmarch for preventing loss of blood during operations on the extremities. The method is said not to be strictly new, but the use of the rubber for accomplishing the end seems to be the novel feature. According to Mr. Erichsen, Mr. Clover practiced the plan in June, 1852, using an ordinary bandage in place of the rubber. Stromeyer, Langenbeck, Silvestie, and others, are also said to have practiced the method many years since. For twenty years the plan referred to by Mr. Erichsen, as used by Mr. Clover, has been practiced at the Massachusetts General Hospital. After bandaging, a tourniquet is applied, and then the bandage removed. The plan, as now carried out, we give below, and would remark that at his surgical clinic at the Roper Hospital in this city, on the 17th of December, one of the editors most satisfactorily tested it in a case of amputation above the ankle:

A rubber bandage, about two and a half inches wide, is carried tightly around the limb, from the fingers or toes upwards, some distance beyond the point selected for operation. The blood is thus driven out of the veins and arteries. A strong India rubber band, or a half-inch tube of rubber, is next drawn tightly several times around the limb, just where the bandage terminates, and tied, or otherwise properly secured. Now the bandage is removed, and the operator proceeds with his operation. The operation is bloodless. The surgeon now, or after removing the

rubber band, ties the vessels in the usual way. An assistant, where no tourniquet is employed, and the rubber band has been removed, must be ready to compress the main vessel.

In our own case the contracted vessels could not be recognized until after the *vis a tergo* had been restored by removing the rubber. The method has been applied to numerous operations besides amputation, as excisions, removal of dead bone, etc. The operator is thus relieved of the embarrassment which often comes of the flow of blood, and the patient is saved even a small loss of the fluid which is a great object in many cases. Apprehensions have been expressed as to gangrene of the tissues so long deprived of blood, and also lest the formation of clots might lead to development of thrombi and emboli, but so far, even in cases where operations have endured over half an hour, no bad results are reported.

Mr. Cripp, of London, modifies Esmarch's plan, by discarding the bandage, and using a seven inch ring of three-eighths inch rubber tubing as the compressing agent. Several turns of the ring are evenly made around the lower part of the limb. By means of a reel each turn is unwound from below and carried higher and higher up the limb, until the ring reaches the point required. The full account can be seen in the Lancet.—[Eds.

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Treatment of Spermatorrhœa.—In a clinical lecture delivered by M. Mallez upon this subject, and reported by M. Jardin in the *Mouvement Médical*, he observes that the condition of the spermatic ducts and passages should be first carefully investigated, in order that the slightest departure from a healthy condition may be observed and treated; the volume of the prostate should be carefully noted, the anus and the rectum should be explored, to ascertain the presence or absence of fissures, worms, etc. Attention should also be paid to the state of the bowels, daily evacuation of their contents being insisted on, and with facility; care should be taken to discover, by direct inspection, whether the proportion of prostatic fluid does not form by far the larger part of the fluid emitted. To ascertain the presence of spermatozoa and the degree of their vitality, minute interrogatories should be made as to the habits of thought of the patient, his mode of life, and the causes which may have predisposed him to the disease. The strength of the patient should be judged of by his mode of walking and by the dynamometer, and it should be found out whether the emission occurs only during sleep, during violent exertion, or during micturition. M. Mallez regards the alkaline bromides as occupying the first position in point of importance in the treatment of this affection, since they have a double action both upon the spinal irritation and on the local sensibility. The preparation he prefers is that suggested by M.

Pelisse, namely, desiccated bromide of potassium, an ounce; tolu water, ten ounces: of this, four dessert spoonfuls, containing about a drachm of the salt, can be taken per diem. The administration of the bromide should precede any local treatment, and may be continued from eight days to two months without harm. After the lapse of ten or twelve days, continuous currents should be applied, though there is some difference of opinion in regard to the manner in which they should be applied. M. Mallez himself prefers to make use of descending currents, passing down the whole length of the spinal cord, from the occipital to the lumbar region: the source of the electricity being from eight to ten elements of a Gaiffe's pile, with chloride of silver. After using this for eight or ten days, the direction of the current may with advantage be reversed. Valerianates of ammonia of zinc and quinine, M. Mallez has found of less service than the foregoing plan. The application of cold water douches to the belly should not be indiscriminately recommended, as they occasionally seem to excite rather than to repress the discharges.—[*Le Mouvement Médical, June* 14, 1873.

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Treatment of Varicocele.—Dr. J. F. Heustis, of Mobile, Alabama, thus describes a new mode he has invented for the cure or relief of varicocele. On the day previous to the operation the bowels should be thoroughly cleared out with a dose of compound cathartic pills, in order that the patient may not be compelled to leave the recumbent position for three days. The patient standing (to fill the veins with blood and render them conspicuous), the distended vein is carefully separated from the other constituents of the cord, and held between the left forefinger and thumb, their points pressed firmly and closely behind it, while a large *sewing* needle threaded with double silk thread, leaving a loop, is quickly passed through the scrotum behind the vein close to the ends of the fingers. A piece of fine pure silver wire is bent on the loop of thread, and drawn through. The patient now lies down, and the vein becomes empty. The skin of the scrotum in front of the vein is pinched up and drawn away from the vein, and a blunt-pointed sewing needle, threaded with the double silk with the wire bent on, is passed through the opening made by the first, in front of the vein, entering at the opening of exit, and emerging at the opening of entrance of the first; the point of the needle being directed towards the front part of the scrotum as it passes through from one opening to the other, while the pinched-up skin is kept drawn forwards. This ensures the closure of the vein (and nothing else) in the loop of wire. The two ends of the wire are passed together through a leaden button and an opening in one end of a piece of vulcanised India rubber ($\frac{3}{10}$ of an inch thick,

three-quarters inch wide, and two and a quarter inches long.) The other end of the India rubber is bent down, and the wires passed through separate openings in it, and loosely tied with a single knot. The operation is now suspended to bring the patient fully under the influence of chloroform, as the tightening of the vein is very painful. The rubber is now pressed down on the button and scrotum, and the wire drawn firmly through and tied or twisted. A thin wire previously holding the ends of the wire together is now snipped, and the two ends of the rubber spring apart, increasing the tension of the wire. The piece of snipped wire is removed, the ends of the ligature cut off, and the operation is finished, and, if neatly done, is almost if not quite bloodless. Morphia is given if the pain becomes severe, and the patient should use the bed-pan to pass his water for three days, so as not to refill the ligatured vein by rising from the recumbent posture. At the end of that time the wire is snipped and withdrawn, chloroform being administered to prevent pain, but the patient should keep his bed for four days longer, to allow the inflammatory swelling to subside. In ten days he can return to his business. The swelling around the vein at the point of ligature is at no time very considerable, and after the removal of the wire subsides rapidly, scarcely leaving a trace of the operation in a few weeks. Whilst the swelling lasts the testicles should be supported with a suspensory net, but there is no need of it after all thickening has disappeared. During the inflammatory action immediately following the operation, the testicles are supported with a linen handkerchief or towel passed behind them, its ends fastened to another round the waist, and lead-water and laudanum kept applied on lint.—[*New York Medical Journal, Vol. XVII., No.* 4, 1873.

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Treatment of Hæmorrhoids.—In the article on this subject in the just published part of the *Dictionnaire de Médicine*, M. de Lannelongue mentions the following plans of treatment that have been suggested: 1. Incision. This should be free, and after having been made the contents of the tumour should be squeezed out. Relapses often occur. 2. Extirpation. This may be total or partial, and may be accomplished with the bistoury, with scissors, with a ligature, or by means of the écraseur. When excision is practised with the bistoury or scissors, care should be taken to leave a little of the skin at the base of the tumour lest retraction of the anus follow, and also to prevent serious hæmorrhage. Removal by the écraseur is followed by little bleeding and no pain, but pyæmia is unfortunately not an unfrequent result. The rule laid down by Gosselin is an important one, namely, never remove simultaneously internal and external hæmorrhoids. The former disappear, or at least lead to no accidents, when the latter are cured. 3. Cauterisation. Three principal modes of effecting

cauterisation have long been in use, namely, by the actual cautery, by solid, and by liquid caustics. Red-hot iron was applied as long ago as the time of Hippocrates. When adopted, it should be done thoroughly. Richet, combining écrasement with cauterisation, uses forceps, which, brought to a white heat, are made to constrict the base of each hæmorrhoidal tumour, leaving some space between each point of application in order to prevent retraction of the anus. Jobert de Lamballe has invented a peculiar kind of forceps, which embrace the tumour and permit the ready application of the cautery without any risk of injury being inflicted on the skin. The action of Vienna paste can thus be easily localized. Amongst the solid and liquid caustics, the caustic of Filhos and nitric acid are the best.—(*Nouveau Dictionnaire de Médicine et de Chirurgie*, 1873, *p.* 431, *tome XVII.*)—*Practitioner*, *September*, 1873.

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Modification of the Operation for Hare-Lip by Sir William Fergusson.—On two successive Saturdays, Sir William Fergusson has recently demonstrated to the students of King's College a novel modification of the ordinary operation for hare-lip. The cases in which he carried out this plan were of the usual type, the fissure being, as in the majority of instances, on the left side; and in both it was considered advisable to take away the intermaxillary bone. This adds to the success of the operation, not only by removing an occasional obstacle to primary union, but because the teeth, which are subsequently developed from the projecting knob, are worse than useless, by reason of their deficient development and faulty position. Instead, however, of removing the portion of bone readily with the knife or bone forceps, it had occurred to Sir William that it would be much better to operate subcutaneously, so to speak, by stripping off and retaining the mucous membrane; and accordingly this was done with perfect success, the bone shelling out readily from its investment; not only will this procedure greatly accelerate the subsequent process of healing, but the advantage is obvious, of retaining a thick and firm mucous surface in preference to the more artificial substitute of cicatricial tissue.—[*British Medical Journal*, *November*, 1873.

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Treatment of Chilblains.—The *Canada Medical Journal* recommends sulphurous acid in this affection. It should be applied with a camel-hair brush, or by means of a spray-producer. One application of this usually effects a cure. The acid should be used pure. A good wash for hands or feet affected with chilblains, is sulphurous acid, three parts; glycerine, one part; and water, one part. The acid will be found particularly useful in the irritating, tormenting stage of chilblains.

Magnesia as a Surgical Dressing.—The interest which attaches to the use of dry earth as a surgical dressing in connection with the recent paper by Addinell Hewson and Conner, on this subject, has induced Dr. Ohlmeyer of Weissenburg to record his experiences in the use of the carbonate of magnesia in somewhat similar cases. He has found it of value—

1. In atonic ulcers.

2. In cases where the epidermis was eroded and the subjacent tissues were the seat of pain, and were prone to subsequent suppuration.

3. In relieving the pain of inflamed wounds.

4. In cases where it was desirous to stimulate the affected surface, prevent the access of air, and limit the formation of pus. He was led, in the first instance, to try this remedy, from its well-known action in those states of the stomach where there is an excessive formation of acids. These latter uniting with the base, magnesia, are neutralized, and carbonic acid evolved. Accordingly he believes that in exposed surfaces where the process of healing is prevented by fermentative action, this dressing is indicated. The use of it was attended with satisfactory results. The magnesia unites with the acids which form on the surface; it excludes the oxygen, forms an artificial covering, irritates the granulations, and forms a barrier against external and harmful agents.

In preparing the application he selects a fluid that will not readily oxidize. Oil answers this indication, and the kind he employs is the oil of sweet almonds. Adding to this the carbonate, he makes a tolerably fluid paste or salve. This is then spread upon linen and laid over the wound. It is held in place in the ordinary way.

Dr. Ohlmeyer also adds that he has used the carbonate successfully in facial erysipelas, when it was important to protect other patients from infection. In this latter case he used water as a substitute for oil.—[*Allg. Med. Central-Zeit.*, 47, 1873.

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Fracture of the Clavicle treated by placing the Arm behind the Back.—M. Broca recently treated a case of fracture of the left clavicle, in which the fracture was near the middle of the bone; was oblique, from above downwards and from without inwards, the fragments riding one another considerably. After numerous plans of treatment had failed to reduce the fragments, M. Broca adopted a suggestion made last year by Dr. Michel to the Société de Chir., and placed the arm in a semiflexed position behind the back, where it was retained by a bandage for eighteen days, with the effect of completely adjusting the fractured surfaces and producing an excellent cure. For a few days longer a

sling was used. The patient, a man of considerable nerve, complained of the inconvenience and pain of the method for only the first twenty-four hours.—[*Jour. de Méd.*

MEDICAL PATHOLOGY, THERAPEUTICS AND PRACTICAL MEDICINE.

Enteric Fever from Infected Milk.—The British journals have recently contained full accounts of a very singular outbreak of fever in certain sections of London, and amongst many of the wealthiest families. Among those earliest attacked was the family of Dr. Murchison; five of the children soon became subjects of the disease.

Through the sagacity and painstaking investigation of this able physician the cause of the disease was soon traced up to the milk furnished from certain dairy farms. Some thirty or more families, residing in close proximity, obtained their milk supply from the same sources, and all suffered more or less. Through the health officers of the section the arrest of the issue of the milk from suspected farms was finally secured, and at last the evil was fixed pretty much upon one farm, located in a district where typhoid fever had prevailed for many months. The most probable mode of the milk infection was believed to be through the water used at the dairy. The water was no doubt polluted from the sewage; an analysis of it showed it at least to contain much matter in a state of putrefaction.—[Eds.

Treatment of Acute Phthisis.—In a clinical lecture on acute phthisis, Dr. Handfield Jones, after criticising Niemeyer's directions, states that his experience of the effects of hospital residence on phthisical patients is sadly unlike Niemeyer's. Real improvement is quite the exception; deterioration rather the rule. "Commend me, if I had phthisis, not to Niemeyer's treatment of lying in bed with leeches or poultices on my chest, but to Sydenham's, of daily riding on horseback, which he says is all in all." According to Sydenham, if you do this you may neglect the rules of diet and deprive yourself of no sort of meat or drink. Dr. Bennett has known several young men on large sheep farms in Australia cure their tuberculous lungs by eating fat mutton and galloping about on horseback. He says: "It is now twenty-five years ago since I became convinced of the injury of shutting up patients in their rooms during winter and regulating the temperature, as was formerly the custom. A young man with cavities in his lungs, who had borne confinement in this way tolerably

well for a winter, found it so irksome on a second trial, that on one occasion he went out and walked to the top of Arthur's Seat. Instead of being worse, he ate his dinner that day with appetite, all his symptoms were moderated, and under the combined influence of pure air and exercise he ultimately worked out a perfect cure, and is now alive and in good health." Dr. Stokes's case of recovery under a prolonged course of duck-shooting, involving frequent wading in water, is to the same purpose. No doubt there is risk of exasperating pulmonary inflammation by exposing phthisical patients to damp chill air, but they will not escape catarrhs (influenzal) by any amount of confinement to warm rooms, and they certainly suffer injury by breathing deteriorated air. On the whole, as it has been well said, there is more danger in staying in than in going out of the house.—(*Medical Times and Gazette, July 26th*, 1873.)—*Practitioner, September.*

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Aspirator.—An interesting case is reported by M. Dieulafoy, in which an infant, six hours old, was poisoned by a dessert spoonful of laudanum, and from whose stomach the poison was extracted, before it had taken fatal effect, by means of the pneumatic aspirator.—[*Boston Medical and Surgical Journal, October*, 1873.

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Specialties.—Dr. Barnes says, "I have recently been honored by a visit from a lady of typical modern intelligence, who consulted me about a fibroid tumor of the uterus; and lest I should stray beyond my business, she was careful to tell me that Dr. Brown-Sequard had charge of her nervous system; that Dr. Williams attended to her lungs; that her abdominal organs were entrusted to Sir William Gull; that Mr. Spencer Wells looked after her rectum; and that Dr. Walshe had her heart. If some adventurous doctor should determine to start a new specialty, and open an institution for the treatment of diseases of the umbilicus—the only region which, as my colleague, Mr. Simon, says is unappropriated—I think I can promise him more than one patient."—[*London Lancet.*

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Treatment of Diphtheria.—Dr. Lolli, of Trieste, (*Wiener Medical Zeitung*, July 8th,) states that while diphtheritis is very fatal in that city, he has lost less than two per cent. of his cases in consequence of the efficacy of the treatment he employs. He does not resort to cauterization, bleeding, purgatives, or emetics, save in very exceptional cases. He maintains the skin in a state of great activity from the very first, by keeping the patient in bed, and, if necessary, applying warm applications or mustard.

These measures are continued until all local and general symptoms have disappeared. As the sole medicinal agent, he employs the following mixture in different concentration: Liq. calcis ℥iv. ad lb. j, liq ferri sesquichl. ℈j ad ℥ij, phenic acid gr. j ad ℈j, mel. rosæ ℥j. With this he paints the fauces every two hours, and gives two spoonfuls of the same in water every two hours.—[*Medical Times and Gazette, August 16th*, 1873.

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Treatment of Diphtheria.—In the American supplement to the *Obstetrical Journal of Great Britain*, for July, Dr. E. L. Duer, of Philadelphia Hospital, strongly recommends the novel treatment with calomel and soda, one-eighth of grain of former, and five grains of latter for child every two hours, connected with a general supportive and stimulating treatment at the same time. The reported success is decidedly encouraging, though the doctor admits that it is in opposition to accepted plans of treatment.—[Eds.

ANATOMY AND PHYSIOLOGY.

Structure of the Neck of the Femur: The Calcar Femo Rale.—Dr. Merkel describes in the *Centralblatt für die Medicin, Wissenschaften*, No. 27, 1873, an arrangement of the hard bony tissue in the neck of the femur, of which he says no account has hitherto been given, and which he terms the *calcar femorale* (*Schenkelsporn*). It consists in a process of the cortical substance, which projects into the spongy substance to the depth of about a centimeter; it arises about the level of the trochanter minor, and ends close under the head of the bone at the anterior part of the neck, thus occupying the situation where the greatest pressure is made in the erect position. In newly born children, it is absent; it appears when they begin to walk, attains its greatest development in middle age, and completely disappears in old persons. These conditions explain the variations in the angle of the neck of the bone at different periods of life, and the increased liability to fracture of the part in old age.—[*British Medical Journal, November*, 1873.

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A Heart with Five Cavities.—An inquest was held in London, September 16th, on the body of Maria Smith, aged thirty, who died under the following peculiar circumstances: It appeared from the evidence that deceased, whose real name was Phillips, resided at No. 12 Union Court, Westminster. On Friday last, deceased, who had long complained of her heart, called a neigh-

bor to her room, who, seeing deceased was evidently in a dying state, called for further assistance, and sent for a medical man, but before his arrival she exclaimed, "I am dying!" and fell on her right side, dead. Mr. George Fenton, No. 28 Great Smith Street, Westminster, remarked to the coroner that this was a case of peculiar interest, as there was only one other similar case recorded in medical annals known to him. On Friday he was called to see deceased, whom he had known by sight for about twelve months, and found her lying on the bed, warm, but dead. He had since made a *post mortem*. On examining the thorax he found the lungs slightly congested, and on separating the heart from the lungs he found the pericardium adherent over the whole surface. In carefully dissecting it off, he found a most extraordinary formation, viz, five cavities. The extra cavity was anterior to the left ventricle, and communicating with it by two small holes. One was just below the semi-lunar valves, and was tendinous all round, and smooth and shining; the other was more at the apex of the ventricle, rather larger than the superior one, and was covered with a valve somewhat similar to the other valves of the heart. The heart was in a most abnormal condition, being almost three times the ordinary size, weighing twenty-three ounces. There was a small fibrinous clot in the extra cavity, and the valves on the right side were inflamed and thickened. The liver was soft, and weighed one pound heavier than it ought to have done. The kidneys were small and much congested, and the capsule was very loose. No doubt the condition of the heart had caused death. The jury, after a few remarks, returned a verdict of death from natural causes. In a note received from Mr. Fenton, he adds: "I have no doubt at some time or other it was a true aneurism of the heart, but the woman having had acute inflammation of both pericardium and endocardium, and the former being adherent at the time the walls of the ventricle were ruptured, saved the life of the woman. I may further state that the size of the cavity was somewhat larger than the ventricle, and the anterior wall was wholly tendinous and smooth."—[*Medical Times and Gazette.*

MIDWIFERY AND GYNÆCOLOGY.

Management of Mammary Abscess.—In his recently published Clinics, M. Gosselin describes two cases of mammary abscess in puerperal women, and states that his experience, chiefly gained in the practice of large towns, has led him to avoid the use of the lancet and to leave them entirely to themselves, applying warm poultices alone. He finds that they usually com-

These measures are continued until all local and general symptoms have disappeared. As the sole medicinal agent, he employs the following mixture in different concentration: Liq. calcis ℥iv. ad lb. j, liq ferri sesquichl. ℈j ad ℥ij, phenic acid gr. j ad ℈j, mel. rosæ ℥j. With this he paints the fauces every two hours, and gives two spoonfuls of the same in water every two hours.—[*Medical Times and Gazette, August 16th*, 1873.

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MIDWIFERY AND GYNÆCOLOGY

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municate sooner or later with the galactophorous tubes, and are thus discharged, as it were, *per vias naturales;* whereas several cases have come under his notice where incisions, made with a view of permitting the escape of matter, have been followed by erysipelas and death, or by most serious symptoms. Only, he says, under very favorable circumstances would he use the bistoury.—[*Medical and Surgical Reporter, December*, 1873.

An Instrument for the Removal of Retained Placenta.—The instruments contrived for that purpose seem to Dr. Rasch to all have the fault in common that the operator does not feel what he has hold of. His instrument is a sensitive forceps, one-half of which consists of the index finger, the other half of a scoop, with a finely toothed bowl just large enough for the tip of the index finger, on which it is to be introduced through the os. The scoop is pushed up on the outer side of the placenta, the index finger guiding, and at last pressing the latter into the bowl. Three fingers of the same hand perform, by pressing the stem into the hollow of the hand, what is necessary to transform this single blade, or half forceps, into a complete one. Thus all danger of injuring the uterus is obviated, and a firm purchase of the placenta or membranes effected. After five years' trial Dr. Rasch warmly recommends his simple and cheap instrument.—[*Obstetrical Journal of Great Britain, October*, 1873.

EDITORIAL AND MISCELLANEOUS.

To our Subscribers.

We would most earnestly bring to the attention of those of our subscribers, who are in arrears, the necessity of immediate payment of dues. To all we would call attention to the fact that with the next number of the *Journal* begins a new subscription year, and the enforcement of our rule with regard to pre-payment, as must be apparent, is necessary for the successful and prompt publication of the *Journal.*

To all subscribers of the present year the next number will be sent, unless notice of discontinuance is received.

Atlanta Medical Journal.

We note with regret the retirement of the able and much honored editor, Professor J. P. Logan, M. D. Greatly impaired health is one of the reasons assigned for the step taken, and thus our parting is made more painful. We are pleased, however, to know that the doctor enjoys the rich satisfaction of having merited the hearty well done of his professional brethren, and of having really fulfilled a mission of peace in his native State. Through his influence, to a large extent, fraternal relations among the medical profession of the noble Empire State have been once more established. In parting with our friend we can only offer our warmest congratulations upon his enviable position, and wish him restored health and increasing prosperity. His successor, Professor R. Battey, M. D., has our best wishes in his new sphere of duties.

Professor M. LaBorde, M. D.

We have to announce the death, in Columbia, S. C., of Prof. Maximilian LaBorde, M. D., of the University of South Carolina. He was the oldest living graduate of the Medical College of the State of South Carolina. He was the author of a History of the South Carolina College, which contains sketches of its most distinguished graduates, also of many valuable contributions to the *Southern Quarterly Review*, and other periodicals. Professor LaBorde was one of the most honored medical men in our State, and he died lamented by all who knew him. We regret that want of space prevents our giving a full sketch of his life.

Necrology.

We record the death of the following distinguished members of the medical profession: Sir Henry Holland, of England; M. Nelaton, of Paris; M. Coste, of Paris; R. W. Smith, of Dublin; Dr. Dixi Crosby, of New Hampshire; Dr. Thomas Miller, of Washington.

Monument to Physicians who Died of Yellow Fever in Memphis.

From a circular letter received, we notice that a movement is in progress suitably to commemorate the death of the physicians who nobly fell at the post of duty during the severe affliction

which recently befel our sister city of Memphis. We heartily commend the subject to the attention of our readers.

The American Public Health Association.

Dr. STEPHEN SMITH, President, met in New York on the 11th of November. Numerous important reports and discussions occupied the attention of this body. A valuable one, by Dr. Toner, appears in this number.

Carolina Military Institute.

We call attention to the advertisement in this number of the Institution at Charlotte, North Carolina, under the care of Col. J. P. Thomas, who is a gentleman of the highest character and attainments, thoroughly well known to us and throughout the South.

Abstracts.

We regret that the press of original matter has crowded out our usual amount of abstracts in this number.

Canadian Medical Association.

We learn from our exchanges that Dr. Marsden, of Quebec, well known for his great public zeal and professional ability, has been elected President of this Association.

Vaccine Virus.

We have received from Drs. E. Cutter & Brother, of Lexington, Massachusetts, a vaccine crust, securely preserved in brass cells, fitted with a glass and rubber arrangement, which is intended to preserve the virus from the effects of the atmosphere.

Erratum.

In Dr. Geo. Douglass' paper, in the October issue, read *suspirious*, for stertorous.

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